DOCUMENT RESUME

ED 264 547 CS 008 260

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TITLE Perceived Leadership Behaviors and Demographic Characteristics of Principals as They Relate to Student Reading Achievement in Elementary Schools.
INSTITUTION Florida Educational Research and Development Council, Inc., Sanibel.
PUB DATE 84
NOTE 87p.
PUB TYPE Reports - Research/Technical (143) -- Collected Works - Serials (022)
JOURNAL CIT Florida Educational Research and Development Council Research Bulletin; v18 n2 Fall 1984

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS Administrator Characteristics; Administrator Responsibility; Educational Research; Elementary Education; *Leadership; *Leadership Styles; *Principals; *Reading Achievement; *Reading Research; School Demography; School Effectiveness; *Teacher Administrator Relationship

ABSTRACT

The responses to two questionnaires by the principals and 186 randomly selected teachers from 40 elementary schools from Hillsborough county (Florida) provided the data for a study that examined whether principals of schools demonstrating high and low levels of student reading achievement differed in leadership behavior and/or demographic characteristics. Student reading achievement was determined by comparing scores from the Comprehensive Test of Basic Skills and the Test of Cognitive Skills. One questionnaire focused upon the principals' involvement behavior with teachers, students, and parents in reading, while the other focused on the demographic characteristics of the principals. The findings supported the hypothesis that the principals of schools with more effective reading programs were more effective in the areas of personnel management, public relations and assuming ultimate responsibility for instructional leadership within the school. The results of the data analysis, however, indicated no relationship between the demographic characteristics of the principals and the levels of student reading achievement in their schools. Appendices include questionnaires for principals and teachers, as well as a substantial bibliography. (HOD)

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FLORIDA EDUCATIONAL
RESEARCH AND DEVELOPMENT COUNCIL

RESEARCH BULLETIN

PERCEIVED LEADERSHIP BEHAVIORS AND DEMOGRAPHIC CHARACTERISTICS OF PRINCIPALS AS THEY RELATE TO STUDENT READING ACHIEVEMENT IN ELEMENTARY SCHOOLS

by
Paul I. Edwards, Jr.

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Volume 18 • Fall, 1984 Number 2

CS008260

F.E.R.D.C. NOTES ON THIS EDITION

This bulletin should be very beneficial to principals presently practicing their art, to persons who are in preparation for the principalship and to those professionals who have the responsibility for the preparation of future principals. While the research is limited to one area of learning or skill development and to the elementary principalship, the findings have a much broader application to other levels of administration. The axiom that the principal should be the instructional leader of the faculty is validated by the results of this study. The preparation for those intending to enter into the principalship must include a thorough understanding of the curriculum and the instructional process. In addition, continuing education in this area is essential for successful leadership.

Mr. Edwards has given his audience valuable data. F.E.R.D.C. is pleased to have the opportunity to add this bulletin to its list of publications.

Charlie T. Council
Executive Secretary

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INTRODUCTION

Educational research conducted in the United States during the past two decades has yielded more reports an a greater emphasis on reading than any other subject or facet of the school program (Levine, 1981). Research indicates that the reading concerns of the 1960's remain in the 1980s and continue to govern the central focus of effective schools studies. Friedman and Rowls (1980) identified three perspectives of reading that remain significant.

First, reading was seen as an important facet of achievement in all school subjects...Second, reading was seen as an important means by which people obtain information about their environment...And third, reading was seen as an indispensable life skill. The Right to Read proclamation of the United States Office of Education, as discussed by Friedman and Rowls (1980), indicates the emphasis placed on reading achievement in our country.

Purkey and Smith (1983), in their synthesis of effective schools studies, point out that the factors that influence achievement must be objectively studied and the results of such studies used in effecting change.

Researchers and educators have suggested that reading achievement can be influenced by such factors as ability, socioeconomic status, quality and methods of instruction, resources, expectations, and the leadership behaviors of the principal (Sweeney, 1982; Levine and Stark, 1918; Armor et al, 1976; Trisman et al, 1976). At the elementary school level, the principal's leadership has the potential to be a powerful influence on student reading achievement (Sweeney, 1982; Shoemaker and Fraser, 1981; Levine and Stark, 1981; Armor et al, 1976; Trisman et al, 1976).

Smith, Carter, and Dapper (1970) acknowledged the potential of the principal to influence elementary school programs. They found that the school principal is in the best position within the individual school to understand and evaluate the needs of the school community and to initiate school level change. Rausch (1974) also found that the interest and concern of the principal for the improvement of reading instruction tended to permeate the program and resulted in achievement gains.

The positive leadership of the principal in reading is especially important since a reading-oriented school provides opportunities for success in other curriculum areas (Sanacore, 1977).

Researchers who have examined the leadership role of the principal in the reading program have indicated that the quality or level of the principal's leadership affects the levels of involvement of teachers, students, and parents with the principal in the school reading program (Howell, 1975; Rausch, 1974; and Smith et al, 1970).

Combs (1982) acknowledged that fluctuations in the levels of involvement between the principal and his teachers, students and parents correlated significantly with the perceptions of that principal's leadership behavior.

Trisman et al. (1976) examined schools with unusually effective reading programs. After synthesizing survey data on a large number of schools, the authors closely examined six schools. Although the

researchers hypotheses included factors such as curriculum, teacher training, class-size, and teacher-characteristic effects, they could find none of these factors that explained why certain programs were effective. Instead, they found schools with effective reading programs to be characterized by having strong principal leadership, high expectations for student achievement, good school atmosphere (including principal-parent, student-teacher rapport), a clear focus on basic skills, small-group instruction, and evidence of the interchange of ideas among staff, parents and the principal. Croghan, Lake and Schroder (1983) point out that of the nineteen competencies identified by the Florida Council on Educational Management for the evaluation of principals, nine contain involvement criteria as high performance behavioral indicators. This study is designed to examine twenty-nine specific principal involvement behavior indicators related to the principal's leadership of the elementary school reading program.

The Problem in its Context

Researchers have recently examined principals' perceptions of their own behaviors related to the reading program (Combs, 1982; Manning & Manning, 1981), but previous studies have typically not focused upon the principal's involvement and its affect on the relationship between student aptitude and achievement in reading. The extent to which the principal involves others in the reading program should be examined to further extend previous studies in the area of leadership behavior and bring focus to the issue of the principal's impact on student reading achievement.

In addition to examining leadership behavior through the extent to which principals involve others in school reading programs, it also appears beneficial to determine whether the demographic characteristics of principals relate to the achievement levels of students within their schools. Research indicates that training, preparation and classroom experience are linked to effective school administrators (Purky and Smith, 1983).

Several studies concerned with the reading knowledge of administrators have been conducted by Austin and Morrison (1963), Cox (1973), and Harris, (1976). These studies indicated that a relationship exists between the principal's knowledge of reading and his involvement in the school reading program. Empirical evidence, however, did not determine the specific preparation desirable for successful leadership in reading. Aldridge (1973) reported that principals and teachers with two or more graduate courses in reading had more knowledge about teaching specific skills in reading than teachers and principals without additional courses in reading. Aldridge, however, was unable to relate the principals' knowledge in reading to student achievement.

McBride (1978) and Rousseau (1971) studied the relationship of elementary teaching experience to effective principal leadership of the school reading program. Results of the studies supported elementary teaching experience as desirable for principals, but did not identify a specific point at which teaching experience might become a significant factor relative to student achievement in reading.

In general, researchers in the field of reading support training, experience and involvement as prerequisites for principals in effective school reading programs, yet sufficient empirical evidence is lacking. Thus the central problem or question examined in this study is: do principals of schools demonstrating high and low levels of student reading achievement differ in leadership behavior and/or demographic characteristics?

Research Questions and Hypotheses

The purpose of this study is to extend previous studies in the area of leadership behavior (Combs, 1982; Harris, 1976; Howell, 1975; Rausch, 1974; Morrison 1963; and Cox, 1973) by bringing focus to the issue of the principal's leadership behavior relative to student achievement in reading. The relationship between

student achievement in reading and specific leadership behaviors of the principal was examined through perceived levels of principal involvement with teachers, students, and parents. Demographic data on principals were also collected and are reported as part of the study.

Thus, principal behavior and principal demographic information were examined relative to corresponding levels of student reading achievement and answers to the following questions sought:

1. Are there differences in the perceived leadership behaviors of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?
2. Are there differences in the demographic characteristics of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?

The general hypothesis for this study is that a relationship exists between the principal's leadership behavior relative to the elementary school reading program and the reading achievement levels of students within that program. In order to facilitate the description of the hypotheses, the following information is applied:

1. Respondent groups are identified as principals and teachers.
2. Category 1 schools are those schools in the sample which met or surpassed anticipated CTBS total reading achievement scores based upon TCS prediction.
3. Category 2 schools are those schools in the sample which did not meet anticipated total reading achievement scores based upon TCS prediction.

The following specific research hypotheses are stated to guide the content of this study and promote clarity and testability:

Hypothesis I: Principals of category 1 elementary schools will demonstrate significantly higher levels of leadership behavior in the school reading program than principals of category 2 elementary schools when comparing the measured perceptions of:

a. Category 1 principals and teachers with Category 2 principals and teachers.
b. Category 1 principals with Category 2 principals.
c. Category 1 teachers with Category 2 teachers.
d. Category 1 principals with Category 1 teachers.
e. Category 2 principals with Category 2 teachers.

Hypothesis II: There is a significant relationship between the level of student reading achievement in schools and the demographic characteristics of the principal when comparing student reading levels with:

a. Years of experience of the elementary principal.
b. Degree/degrees held by the elementary principal.
c. Certification area of the elementary principal.
d. College courses in reading completed by the elementary principal.
e. Elementary teaching experience of the elementary principal.
f. Inservice training courses in reading completed by the elementary principal.

DEFINITION OF TERMS

The following terms have been defined for the purpose of this study to create common understanding for clear interpretation of information. These include:

Anticipated Reading Score—This term refers to a reading score predicted on the Comprehensive Test of Basic Skills (achievement test) by the Test of Cognitive Skills (aptitude test).

Category 1 School—This terms refers to a school where the average total reading performance met or surpassed anticipated CTBS total reading achievement levels in grades 3 through 5 based upon TCS prediction, identified within the study by a positive composite score (ie/ +1...+4: method of computation described within the study).

Category 2 School—This term refers to a school where the average total reading performance did not meet anticipated CTBS total reading achievement levels in grades 3 through 5 based upon TCS prediction, identified within the study by a negative composite score. (ie/- 1...-4: method of computation described within the study).

Composite Score—This term refers to a total school reading score ranging from (-4) to (+4) indicating that school's individual level of success on the CTBS reading achievement test based upon a predicted score by the TCS aptitude test. Positive composite scores (Category 1) identify schools that met or surpassed anticipated reading achievement levels while negative composite scores (Category 2) identify schools that did not meet anticipated reading achievement levels.

CTBS—This term refers to the Comprehensive Test of Basic Skills. An achievement test published by McGraw-Hill and nationally standardized and normed in 1980-81 by administration to 180,000 students throughout the United States.

Demographic Characteristics—This term refers to those specific, individual, historical, characteristics which each individual principal brings to the job. Such characteristics are specifically described within this study on the Demographic Information Questionnaire. Six specific characteristics are included for testing in Hypothesis II.

Involvement—This term refers to a score on the involvement questionnaire which relates to those activities which include the principal in the exchanging of ideas and information relative to the planning, implementing, monitoring and/or evaluating of the school reading program.

Leadership Behavior—This term refers to those characteristics of the principal's behavior which influence his involvement levels relative to the school reading program between himself and teachers, students and parents.

Obtained Reading Score—This terms refers to a reading achievement score obtained as a result of taking the CTBS achievement test.

Parent Involvement—This term refers to those activities which include the principal and parents in the exchanging of ideas and information relative to the planning, implementing, monitoring and/or evaluating of the school reading program.

Strong Leadership Behavior—This term refers to those characteristics of the principal's behavior which increase levels of principal-teacher, principal-student, and principal-parent involvement in the school reading program.

Student Involvement—This term refers to those activities which include the principal and students in the exchanging of ideas and information relative to the planning, implementing, monitoring, and/or evaluating of the school reading program.

TCS—This term refers to the Test of Cognitive Skills, a series of aptitude tests measuring verbal and non-verbal reasoning ability. Standardized and normed in 1980-81 with CTBS it is used to anticipate performance on CTBS. TCS anticipates achievement scores for students having similar attributes in common. (Burket et al, 1982).

Teacher Involvement—This term refers to those activities which include the principal and teachers in the exchanging of ideas and information relative to the planning, implementing, monitoring and/or evaluating of the school reading program.

Total Reading Achievement—This term indicates the obtained level of achievement in reading as measured by CTBS.

Weak Leadership Behavior—This term refers to those characteristics of the principal's behavior which decreases levels of principal-teacher, principal-student and principal-parent involvement in the school reading program.

REVIEW OF THE LITERATURE

The review of literature has been divided into the following areas: (1) Socioeconomic status (SES) and student achievement, (2) Aptitude, intelligence and student achievement, (3) Principal leadership behavior and student achievement, (4) Principal leadership behavior in reading and teacher involvement, (5) Principal involvement with students in reading, (6) Principal involvement with parents in reading, and (7) Demographic characteristics of principals.

Although the major focus of this study does not include an experimental test-retest examination of student achievement, comparisons are made based upon accurate obtained vs. anticipated achievement levels by school. Literature relative to student achievements was therefore thoroughly reviewd and is included here to establish an empirical base for this study.

Socioeconomic Status and Student Achievement

One of the most consistent findings within the research examined is the relatively strong relationship between socioeconomic status and the level of student achievement (White, 1979). Socioeconomic status has been considered, according to White, to have such a powerful influence on all other school factors that the effect of SES must be studied, accounted for and/or statistically controlled when conducting social research in schools.

In a meta-analysis study, White (1979) identified 2489 studies relating student achievement with SES as a variable. Of the total number, 64 were not of appropriate content, 40 dealt with philosophical issues or instrument development, and 44 did not report sufficient information to calculate correlation coefficients. For the remaining 100 studies, White reported that low income as an aggregated figure accounted for .767 of the variance in student factors related to achievement in school. For individual students, White reported a coefficient of .315 for the impact of income on student achievement.

Difficulties in learning to read have been related to students of lower income levels. For a sample of 223 third grade students, Hill and Giammatteo (1963) reported that students from high economic levels scored an average of 8 months ahead of students from lower economic levels on standardized reading tests. In the study, however, variance in reading ability prior to the initiation of reading instruction was not reported.

Oakland (1969) also noted significant differences in reading achievement for 60 children when grouped by income levels. Higher income students scored higher in achievement on a standardized reading test than students from low income families.

Hanson and Robinson (1967) studied reading achievement of primary grade children of different SES levels. A difference in achievement between high, average, and low income levels was reported, in favor of the high economic group (p. 55). The range of difference of student achievement increased from kindergarten through third grade. The study was conducted over a 1-year period, sampling children from each grade level.

A study was also conducted of teachers of students with reading difficulties by Gershman and Kershow (1977). The study indicated that children of low economic levels were almost twice as likely to be mentioned by teachers as having difficulties in learning than children of any other socioeconomic group. In addition, more low income children were in special classes or working below grade level. However, among other inconsistencies the study did not attempt to determine the influence of teacher expectations on the quality of instruction given low economic students.

In support of the effect of expectations on student achievement, Edmonds (1979) stated,

> repudiation of the social science notion that that family background is the principal cause of pupil acquisition of basic skills is probably prerequisite to successful reform of public schools for the poor (p. 23).

Edmunds suggested that educators must look beyond race and socioeconomic status to explain the success or lack of success in achievement for all students.

Tomlinson (1980) agrees with Edmonds (1979) and adds that common purpose and clear goals together with instructional leadership from the principal increases the involvement levels of teachers and parents in the school program and contribute to school effectiveness. The Phi Delta Kappan (1980) review suggests that factors such as fostering high levels of parental involvement and creating goal-specific staff development programs be added to the list of effective school characteristics. Due to recent studies, these characteristics now appear to have a greater impact on student achievement than other factors identified in previous research.

Aptitude, Intelligence and Student Achievement

Although the measurement of intelligence has, from its beginnings, been tied to school situations, the question of what it is about student achievement that relates it to intelligence has been a persistent theoretical and practical issue since Cattell's (1948) suggestion that a correlation might exist. Historically, Woodrow (1945/1946) was among the first to demonstrate that while the correlation between intelligence and achievement was substantial, gains in achievement from year to year seemed to be negligibly related to intelligence. As Tilton (1949) later demonstrated, however, when the easiest items were eliminated from the achievement tests, gains on those tests were significantly correlated with intelligence test scores. Intelligence appeared to be more related to the complexity of the material that was mastered than it was to the amount that was learned (Tilton, 1949).

Concern over the fact that the predictive validity of general intelligence tests was of little value in understanding how measured aptitude related to learning requirements (Cronbach & Gleser, 1957), led to more systematic attempts during the 1960s to discover how aptitudes interacted with instructional treatments (Cronbach & Snow, 1977). The focus of the 1977 study was on identifying the types of instruction that: (1) could make learning relevant to particular aptitudes, (2) could make learning easier for a low-aptitude individual, and (3) could improve the aptitude. Cronbach & Snow (1977) pointed out that even in those programs of research that started wth specialized ability measures and found interactions with treatment, the data seemed to warrant attributing most effects to a general ability.

A review of more recent literature also indicates a positive correlation between aptitude and achievement. The most frequently cited correlation coefficient is .50. Tests of maximal performance of aptitude and achievement are generally used for assessing the relationships between the two variables. Brown (1983) indicates that factors related to the individual, as well as to the chosen method of measurement, must be considered to obtain the best possible prediction of the relationship between aptitude and achievement.

The degree of correlation, however, varies according to the type of aptitude measure employed and thus, to a lesser degree, the accepted definition of intelligence inherent within the measure (Snow, 1980). The distinction between the terms aptitude, intelligence, and ability are not consistently applied throughout the literature examined. Brown (1983) states that intelligence is a term that everyone thinks he understands but few people can define precisely.

Ebel (1979 argues that intelligence tests generally do not have a high degree of construct validity. For most definitions of intelligence, therefore, the preferred term, he states, should be aptitude. Snow (1980) points out that aptitude as a construct refers to psychological characteristics of individuals that predispose and thus predict difference in learning under specified instructional conditions. To the extent that the constructs of aptitude differ, so should the operational definitions of the terms differ. Numerous researchers indicate that because the measurements are useful in predicting school success, the phrase (scholastic aptitude) is more honest and descriptive (Anastasi, 1976; Mehrens & Lehmann, 1980).

Much in the literature examines the issue of the distinction between aptitude and achievement. Mehrens and Lehman (1978) point out that to some psychologists the distinctions seem clear; to others both address the issue of achievement and that aptitude is merely a specific type of achievement.

Mehrens and Lehmann (1978) further indicate that although there is correlation between intelligence and achievement there is no rule that allows us to distinguish an aptitude test from an achievement test by cursory examination of the test format. Aptitude and achievement constructs, they point out, typically differ among several dimensions: (1) general aptitude tests typically have broader coverage than achievement tests; (2) achievement tests are more closely tied to particular school subjects; (3) achievement tests typically measure recent learning whereas aptitude tests sample learning from all experiences in the individual's past; (4) studies generally show that aptitude tests have higher heritability indices than achievement tests; and (5) the purpose of testing aptitude is to predict achievement while the purpose of testing achievement is to measure the level of knowledge or skills (Journal of Educational Research, 1982).

Numerous studies describing the correlation of intelligence and scholastic ability have been published since the first measurement approach (Binet-Simon, 1905), was introduced. Ebel (1979) states that so generally consistent and statistically incontestable are these massive results that even the critics of mental testing concede the substantial relationship between IQ and scholastic achievement. In general, no other single factor that we can determine about a child after the age of five better predicts his or her future progress and attainments than the IQ (Jensen, 1981).

Some of the commercially produced mental ability (aptitude) tests published correlation coefficients related to scholastic achievement. For example, using the Stanford-Binet with 1972 norms, correlation coefficients of. 75 and. 80 were obtained when used in conjunction with achievement tests (Mehrens & Lehmann, 1978). The Otis-Lennon School Ability Test base criterion related validity on studies showing correlation with achievement tests and school grades. The coefficient cited was. 70. Correlations with teacher grades fall within the. 50 to. 70 range in grades 1-8 and the. 30 to. 50 range at the high school level (Mehrens & Lehmann, 1978). The Differential Aptitude Tests (DAT), a multiaptitude battery, yields highly correlated scores (.70 to. 80) with achievement test scores administered either concurrently with or after the DAT (Brown, 1983). The American College Testing Programs (ACT) high school test battery yields a correlation of. 15 to. 65, with a median of. 48, with later college performance (Snow et. al., 1980).

In addition to the correlation between aptitude and achievement reported by the publishers of such tests, numerous research studies have demonstrated a high positive relationship between the two variables (Cattell and Butcher 1968; Matarazzo 1972; Jensen 1981). Intelligence and achievement are correlated but not synonymous as indicated by Jensen (1980). Scholastic achievement involves many different identifiable causal factors and correlates than IQ. Brown (1983) indicates that achievement may be thought of as the summation of intelligence, motivation, emotional stability, persistence, work habits, interests, values, and certain personality traits.

With regard to the educational level and the predictive validity of the IQ, Jensen (1980) reinforces that the most frequently mentioned value of the typical correlation between IQ and scholastic achievement is. 50. The typical range of most of the validities of a single IQ score for predicting academic achievement as described in the Journal of Educational Research (1982) is as follows for various levels of schooling:

Elementary School	.60 — .70
High School	.50 — .60
College	.40 — .50
Graduate School	.30 — .40

Ebel (1979) states that lower correlations at higher educational levels do not imply that intelligence becomes any less important at more advanced levels of education, only that other complex factors become involved.

Numerous studies which indicate the positive correlation between intelligence and student achievement also define other variables in an attempt to account for variance. Jencks (1972) and Jensen (1981) suggest that genetic background, family background, race and socioeconomic status are either directly or indirectly related to IQ and thus, to achievement. Jencks (1972) and Jensen (1981) both list these factors as affecting intelligence test scores to some degree, but neither they, nor others conducting research in the field, agree on the amount of variation in achievement related to these factors.

School-related variables such as curriculum, teacher-student relationships, school leadership, and peer groups have been shown to have an influence on achievement (Jensen, 1981). Coleman (1981), initially demonstrated a positive difference in the achievement levels of students attending private schools versus public schools.

The effect on achievement, however, was not related to aptitude, rather it occurred in the presence of three attributes: (1) a disciplined climate with effective teacher, (2) effective school leadership; and (3) demanding courses. Coleman suggested that achievement levels could be raised, regardless of aptitude, if those three attributes were operating within the school whether public or private.

Principal Leadership Behavior and Student Achievement

Leadership behavior of the principal has been linked to school effectiveness and student achievement through several research studies. Historically, Gross and Herriott (1965) reported a positive relationship between the leadership of 175 elementary school principals and student learning. The researchers concluded that their findings offered empirical support for a leadership conception of the principal's role. Although the probability of a relationship was high, many variables within the study were not controlled reducing generalizability.

Madden (1976) acknowledged the principal's involvement in 4 out of 5 of the factors which he determined necessary for raising student achievement levels. The Madden study appeared to be more statistically extensive and rigorous than most as he identified 21 pairs of elementary schools that matched on the basis of pupil characteristics but differed on standardized achievement measures. Madden's research identified five factors that seemed to differentiate effective from less effective schools relative to student achievement. In more effective schools: (1) teachers reported receiving significantly more principal support; (2) there was an atmosphere conducive to learning; (3) the principal had more impact on educational decision-making for his individual school; (4) there was more evidence of pupil progress monitoring by principals and teachers; and (5) there was more emphasis by the principal on teacher-parent-student involvement.

In a synthesis of research on school effectiveness and student achievement, Shoemaker and Fraser (1981) reviewed 10 studies concerned with schools where low income children were successful and characterized principals of effective schools as assertive leaders. The authors described assertive leadership as "what the principal does and what the principal allows to happen" (p. 180). Principals of effective schools were also achievement-oriented leaders who did not exclude good human relations, but allowed nothing to come before student academic success. Principals and teachers in effective schools knew where they were headed and evaluated pupil progress along the way. In addition, the most consistent finding among the studies reviewed by Shoemaker and Fraser was the relationship between student achievement and high expectations by principals and teachers.

B. C. Glenn (1981) conducted case studies of four urban elementary schools, all predominantly poor and minority. Her findings, like those of the studies previously cited, emphasized the importance of explicit goals, discipline, order, a supportive atmosphere, high expectations for student achievement and strong leadership from the principal. Glenn (1981) also indicated that school effectiveness was enhanced by the involvement of teachers and students with the principal in planning and developing activities specifically for reading and math programs.

Levine and Stark (1981) investigated the implementation of a reading program in three New York elementary schools and one Chicago elementary school. They also examined five urban elementary schools, three in Los Angeles and two in Chicago, that were attempting to improve via school-wide approaches (comprehensive curriculum and instruction without relying on pull-out arrangement). Their descriptions of effective elementary schools suggest that it is possible to increase schoolwide reading scores by combining individualized strategies with general principles of school effectiveness, innovation, implementation and organizational development. Levine and Stark listed ten instructional and organizational processes common to most improving schools. One of the ten processes which they found necessary for improvement in reading achievement was that a school must have strong administrative leadership characterized as supportive of teachers and skilled in providing a structured institutional pattern in which teachers and parents could be involved and function effectively.

Sweeney (1982) reviewed eight school effectiveness studies conducted during the 1970s. The majority of the studies focused upon schools that were effective for students of low income levels. In the review, Sweeney examined five of the studies also reviewed by Shoemaker and Fraser. Results of the eight studies were summarized and Sweeney noted that leadership behavior of the principal was positively associated with school outcomes in each study.

Several leadership behaviors of principals emerged from the analysis of data that were consistently associated with effective schools and student achievement. The behaviors of principals that Sweeney cited included coordinating the instructional program, emphasizing achievement, frequently evaluating pupil progress, assuming responsibility for instructional decision making, providing an orderly atmosphere conducive to communication and involvement, and supporting teachers.

The majority of the literature reviewed supports the link between the strong leadership behavior of the principal and effective schools. The syntheses of research on school effectiveness for low income students also offers educators an opportunity to look beyond socioeconomic status when considering the factors that may affect student achievement, as suggested by Edmonds (1979).

Additional evidence of linkages between the site-level administrator and school outcomes has further emphasized the importance of the school "climate" (Brookover et al., 1979, Grant, 1980). Noblit (1979) conducted comparative, ethnographic case studies of principals' administrative styles and school climates and noted a negative correlation between strong school leadership and disciplinary activity. Rist (1972) has discussed the role of the principal as a cultural maximizer in an all-black ghetto school. In a comparison of

overachieving and underachieving schools in Florida, in terms of test results in reading, Stoll (1979) found that the more effective schools were more likely to have administrators who communicated the importance of reading, worked toward a coordinated reading program and took steps to provide adequate instructional materials. Likewise, Vallina (1978) compared principals' behavior and reading achievement scores in Title I-ESEA schools in one large-city school system. The principals of successful schools were more likely to hold themselves and their schools to high standards of excellence, were more apt to concentrate their time upon faculty evaluation, improvement, physical appearance of the school, and made greater effort to enhance community relations. Venezky and Winfield (1979) reported that the achievement orientation of the principal, rather than a human relations orientation, was a significant force in their study of success in reading instruction in poverty area elementary schools. Finally, Clark, Lotto and McCarthy (1980) aggregated 117 studies of urban school achievement and concluded that (a) site-level leadership is crucial in determining school success; (b) this leadership is typically of an attitudinal and motivational nature; (e.g., the creation of an achievement climate); (c) successful schools engage in staff development and establish clearly stated goals and objectives; and (d) successful urban schools have high levels of parent contact and principal involvement.

Numerous studies suggest that concepts such as school climate do after all have some meaning for the educational program (Brookover et al., 1979; Rutter et al., 1979). Moreover, there is reason to believe that administrative effects need not necessarily be so indirect. Mann (1981) states that administrators can make a difference through control over such matters as the shaping of the allocation of time for instruction. Further, he states that administrators can take the lead in trying to bring about the implementation of outcome-oriented instructional approaches, such as mastery learning.

Crowson and Porter-Gehrie (1980) conducted an ethnographic study of the principal's work-a-day world in one major city school system. They focused on the means whereby building administrators came to terms with the uncertainties of inadequate site-level resources, challenges to administrative authority and ambiguous role expectations. Caught between the rules and procedures of the central office and the pressures of their own school environments, the principals were seen to engage in special interpretations of school policy, redefinition of roles, and the flexible application of organizational rules and procedures. Crowson et al. point out that through devices such as loose interpretation of school system enrollment policy, special strategies of conflict reduction in the face of student discipline issues, and a balancing of carefully channeled parent involvement, building principals managed to cope with uncertainties of resource adequacy, school disorders, and parental expectations.

The Crowson and Porter-Gehrie (1980) findings have been expanded and extended in a report on principals' discretionary behaviors (Morris et al., 1981) which shows that building principals will manipulate school system rules in order to: (a) maintain the school site in an acceptable equilibrium with the organizational environment; (b) protect the school from the uncertainties of an unpredictable clientele; and (c) adapt school district policies to the special needs and interests of their immediate community.

Morris (1981) indicated that the school site is strategic in that it is the focal point of parental and community contact. Satisfaction is sought and problems are first raised at the level of the teacher and the school principal. Moreover, some research shows that successful schools are characterized by relatively high levels of parental contact and involvement (Clark et al., 1980: Ingram, 1979). Finally, there is evidence that the school principal has a key role in influencing community and parent participation in school affairs (Ellett & Walberg, 1979; Koza & Levy, 1978; P. E. Peterson, 1974; Summerfield, 1971).

Principal Leadership Behavior in Reading and Teacher Involvement

Throughout the literature reading educators have suggested leadership activities in which principals should be involved. Rausch (1974) observed that the principal has the potential to provide the leadership necessary to promote involvement of the faculty. He further states that teacher involvement with the

principal is necessary to insure an effective school reading program. According to Klopf (1972), the principal should involve the staff in determining the goals of the school and the means by which the goals will be met. Involving teachers directly in decisions concerning organization and materials for the reading program was seen by Durkin (1974) as an important task for the principal.

The influence of the principal on teacher performance can be an important aspect of an effective reading program. A study conducted with 175 elementary school principals was reported by Gross and Herriott (1965). A positive relationship between the principal's strong leadership and teacher morale, professional performance, and pupil learning was reported.

From the teacher's view, the principal should be involved in the reading program with teachers. McNinch and Richmond (1977) reported that for 148 teachers in Mississippi, a significant number responded that the principal should have been more involved in the reading program. Teacher views of principal involvement in reading programs were also examined by Seifert and Beck (1981). After surveying 82 principals and 246 teachers, Seifert and Beck reported that 81% of the principals believed that instructional leadership was the principals' most important duty. In contrast, only 31% of the teachers believed that principals made leadership of the school reading program one of their top priorities.

Avery (1972) summarized the issue of teacher involvement with the principal in reading when he stated that teachers want guidance, encouragement, inservice training, time for planning, and relief from obstacles which inhibit effective reading programs. In a more recent study Trisman et al. (1976) examined schools with unusually effective reading programs. After synthesizing survey data on a large number of schools, the authors closely examined six schools. Although the researchers hypotheses included factors such as curriculum, teacher training, class-size, and teacher-characteristic effects, they could find none of these factors that explained why certain programs were effective. Instead, they found schools with effective reading programs to be characterized by having strong principal leadership, high expectations for student achievement, good school atmosphere (including principal-parent, student-teacher rapport), a clear focus on basic skills, small-group instruction, and evidence of the interchange of ideas among staff, parents and the principal.

In an examination of 20 Los Angeles schools participating in a special program to improve reading, Armor et al., (1976) attempted to identify the total school and classroom policies that have been most successful in raising the reading scores of minority children. The authors suggested that the following school characteristics are associated with gains in reading performance: (1) teachers' high expectations for students; (2) maintenance of orderly classrooms; (3) high levels of parent-teacher, parent-principal, and teacher-principal involvement.

Principal Involvement with Students in Reading

The importance of the principal's involvement with students in reading is acknowledged by Tyler (1983). Tyler indicates in his analysis of (Studies on Schooling) that the involvement of parents with principals and teachers is a powerful influence on children's attitudes toward school and their motivation to achieve. His summary of research studies supports the leadership behavior of the principal as a prime ingredient for the needed increase in involvement levels necessary to effect positive change in school achievement levels.

Howell (1975) suggested that the principal should have as one goal to create an atmosphere that encourages active student participation in the reading program. In 1972, the National Association of Elementary Principals passed a resolution encouraging all elementary principals to develop with their faculties and their communities programs that will study and diagnose the needs of each child so that he may enjoy reading and work toward his potential through effective reading. A reading-oriented school can provide students with opportunities for success in other curriculum areas and principals are in a position to help improve student learning (Sanacore, 177).

Reports of studies conducted in California and Florida, where achievement was positively affected when the principal was actively involved with students in reading, were discussed by Stanchfield (1976). Principals in the studies visited classrooms and interacted frequently with students.

Ralston (1979) reported that attitudes toward students on the part of principals and teachers positively affected mean achievement test scores of Title I participants. Students with higher reading achievement scores were in schools where both the principal and teachers had positive attitudes toward the students and the reading program. In the Michigan Department of Education studies reported by Jacoby-High (1980), the principal's belief that all students could learn to read was identified as a factor in schools where student achievement of basic skills in reading was progressively improving. The synthesis of research on effective schooling by Shoemaker and Fraser (1981) and Sweeney (1982) also supported the significant impact of the principal upon student achievement. Sweeney reported that in schools considered to be providing effective instruction the principal's concern for achievement was known to both students and teachers as were his high expectations for students. He exhibited a commitment to ensuring that students could and should be achieving at relatively high levels and assumed responsibility for reaching those levels.

The studies reviewed supported principal involvement with students in the school reading program. Throughout the literature, principal involvement with students has been linked to schools with higher student achievement in reading.

Principal Involvement with Parents in Reading

Because of the principal's leadership position in the school, Smith et al. (1970) observed that the principal is in the best school based position to understand and evaluate the needs of the community and the parents relative to student achievement. Laffey (1980) suggests that the principal be responsible for presenting the reading program in a favorable manner to the parents and the community. When parents were involved in identifying the goals of the school reading program and understood the goals, they were more likely to become involved with reading program goals at home.

Several researchers have suggested ways in which the principal may involve parents in school reading programs. Smith et al. (1970) reported on several projects where mothers were used as tutors and aides in the reading program to improve feedback concerning the reading program to the community. It was recorded that schools where the principal was enthusiastic about involving parents in reading also showed significant gains in student reading achievement scores. The opposite was true of schools where the principal was less than enthusiastic. Sanacore (1974) reported successful use of parents as tutors or teacher aides in New York schools.

Activities to bring the reading program to the attention of the parents and the community were suggested by Criscuolo (1973). He recommended that principals encourage activities such as exhibits at local shopping centers and book banks at the school where parents and students were able to exchange books. Laffey (1980) cited suggestions by Turbowitz for principals to involve parents in the reading program through school assemblies where students have the opportunity to demonstrate their reading skills.

Klopf (1972) suggested that the principal involve parents in policy making and program aspects of the school. He suggested that parents may serve in an advisory capacity to the principal.

In his study of research studies on effective schools, Goodlad (1983) supports the need for involvement as he suggests that we upgrade the nation's dialogue about effective schools by infusing it with hard data regarding the condition of programs in our schools. He states that we should promote strategies designed to release the power inherent in school involved groups, such as the principals, teachers, students and parents.

Purkey and Smith (1983) synthesized numerous studies relative to involvement and achievement in their literature on effective schools (Armor et al., 1976; Coleman et al., 1981; Levine and Stark, 1981). They reinforced the conception that parental involvement with teachers and the principal has been identified in most studies and appears to be a significant factor in affecting student achievement.

Demographic Characteristics of Principals

Because reading instruction is the keystone of the elementary school's academic program, the principal should have sufficient knowledge and training in reading to provide direction to the curriculum. Avery (1972) states that schools need the kind of administrator who will keep abreast of the growing research and literature in reading instruction and apply that knowledge toward the eradication of reading failure. Carlson (1972) agreed when he stated that knowledge in the area of reading instruction merits a high priority on the part of the principal.

Preparation of administrators in the field of reading has been examined by several researchers. According to Rausch (1974) administrators need to better prepare in order to provide leadership for more effective reading programs. Principals should have a knowledge of such areas as learning theory, reading processes, instructional methods, diagnosis, remediation of reading difficulties, and assessment of competence in reading instruction (Austin & Morrison, 1963; Fech & Micetech, 1977). Sweeney (1969) suggested that principals take a sequence of at least three reading courses. He recommended a basic methods course, a course in organization and supervision of reading programs, and a course in the diagnosis and remediation of reading problems be taken by all elementary principals.

The principal's knowledge of reading has been the topic of several more recent research studies. An investigation of Clark County, Nevada, elementary school principals' knowledge of reading in the primary grades was conducted by Gehring (1977). In comparison to teachers, Gehring reported that principals demonstrated more advanced knowledge relative to the reading program. Gehring concluded that principals were qualified, because of their knowledge of reading, to offer instructional leadership. Aldridge (1973) reported that principals and teachers with two or more professional courses in reading were more knowledgeable in reading as measured by the Inventory of Teacher Knowledge of Reading.

Researchers have reported that a strong relationship exists between effective reading programs and the principal's knowledge of reading. **In The First R: Harvard Report on Reading in the Elementary School**, Austin and Morrison (1963) stated that in those school systems where the principal was knowledgeable about the reading program...instruction was good. However, in reviewing the analysis of data that was included in the study, impact of the principal's knowledge of reading upon the school reading program was not clearly evident. Austin's comment may have arisen from personal observation.

In a longitudinal study of 10 schools in England, conducted by Morris in 1966 and cited by Harris (1976), the knowledge of the principal and the staff, in that order, were identified as the main factors in the success or failure of the reading program (p. 49).

Principals who are trained in reading can have a significant impact upon the reading program. Research and evaluation specialists for Philadelphia Public Schools reported that elementary principals, who were formerly reading professionals, were more perceptive to the importance of reading and better able to motivate their teachers. Pupils in the fourth grade in schools where principals have been reading professionals achieved significantly more growth in reading when compared to other fourth grade students in Philadelphia schools over a 3-year period (Harris, 1976). In a California study, cited by McHugh (1968), principals who received training in the supervision of reading programs improved their leadership of reading programs. After training, McHugh noted that the principals were seen by their teachers as facilitating noticeable improvement in reading for students.

Teaching experience has been reported, in a study conducted by McBride (1978), as being an important factor for principals. Based upon principal responses to a questionnaire, McBride concluded that the principal with elementary teaching experience was more likely to have a high commitment to reading and in turn a higher level of pupil achievement.

After studying 80 principals in Oregon with elementary school teaching experience, Rousseau (1971) reported that principals with more teaching experience tended to be more effective in their schools, according to teacher perceptions.

Throughout the literature studies support elementary teaching experience as an asset for elementary principals in working with the school reading program. Other available studies, however, do not identify sufficient empirical evidence relative to the number of years of elementary teaching experience desirable for elementary principals.

Summary of Literature Review

Researchers have concluded that the school environment can make a difference in the achievement levels of all students. Although research indicates that such factors as socioeconomic status and intelligence impact significantly upon student achievement, educators do have the potential to improve educational outcomes for students. As the individual responsible for the management of the elementary school, the principal has the profound opportunity to influence student achievement. Relative to recent research on school effectiveness, the leadership behavior of the elementary school principal has been associated positively with the achievement levels of students. Effective schools have been found to have principals who have assumed a leadership role that was different from the principals of schools that were less effective.

In general, researchers in the fields of reading and leadership behavior support training, experience and involvement as prerequisites for principals in effective school reading programs, yet sufficient empirical evidence is lacking.

The literature examined for the purpose of this study defines the parameters of inquiry and suggests the framework upon which this research is based.

DESIGN AND METHODOLOGY

Described in this section are the methods and procedures used in the investigation of perceived leadership behaviors and demographic characteristics of principals in elementary schools as they relate to student achievement in reading.

The design of this study is ex post facto. The ex post facto design was selected because this study is intended as a systematic empirical inquiry in which there is no direct control of independent variables. The manifestation of the independent variable examined in this study has already occurred and therefore is not manipulable. This study attempts to identify an antecedent which gave rise to the consequences of high and low reading achievement. Inferences relative to leadership behavior and student achievement were made without direct interventions which could have caused variation among the variables. The variation examined in this study was achieved, not by the manipulation of a variable but rather the selection of sample subjects in whom the variable was absent or present. The level of principal involvement described within this study is identified as an attribute variable rather than an active variable. The ex post facto design selected is appropriate for the study of non-manipulable, attribute variables and permitted the examination of the relationships among the variables identified (Ary, Jacobs, Razavieh, 1979).

The sampling, instrumentation and data collection procedures employed in this study were selected in order to maximize external validity and are constructed based upon empirical research recommendations (Ary et al., 1979; Williams, 1978).

The procedures identified maximize compensation efforts relative to the weaknesses inherent in the ex post facto design. These potential weaknesses include: (1) possibilities for spurious results due to the inability to manipulate variables; (2) possibilities of common causes or the possibility that both the independent and dependent variables of the study are merely results of a third variable; (3) possibilities of reverse causality or that the reverse of the suggested hypothesis could also account for the findings; (4) possibilities that other independent variables could exist in addition to the one under consideration in the ex post facto study which could cause the observed variation (Ary, Jacobs, Razavieh, 1979).

Sampling Procedures

Schools to be identified as the sample were selected from a population of 91 elementary schools in Hillsborough County, Florida. The schools represent both urban and rural environments with student populations ranging in grade from kindergarten to 5 or kindergarten to 6. Due to the unique clustering of grade levels within schools in Hillsborough County, Florida as well as the need to make comparisons by school, only schools housing grades K-5 or K-6 were considered for the sample.

In order to avoid rival hypotheses, school population transfer records were examined relative to the mobility of students as well as the duration of assignment for the current principal. Schools with a mobile student population in excess of 30% (or) those administered by a principal who was assigned on or after July 1, 1982 were eliminated from the sample. Remaining schools were then categorized based upon the results of the 1983 Spring Hillsborough County testing program. In April 1983, all Hillsborough County Public School students in grades K through 9 were administered the Comprehensive Test of Basic Skills Form U (CTBS-U), a new series of achievement tests.

In conjunction with the CTBS, students in grades 3-6 also were administered the Test of Cognitive Skills (TCS) a series of aptitude tests measuring verbal and non-verbal reasoning ability. The TCS, which was nationally standardized at the same time as the CTBS, is used to anticipate performance on the CTBS. The difference between a student's anticipated (TCS) and obtained (CTBS) scores is an estimate of the extent to which the student's obtained achievement falls below or above the typical score of students with similar attributes (Burket et al., 1982).

In the examination of the remaining schools' anticipated and obtained scores, each grade level's total reading score was examined and a plus (+) was assigned to each grade level in which the anticipated reading score was met or surpassed. A minus (-) was assigned to each grade level in which the anticipated reading score was not met. Plus and minus signs were added to form a composite score for each school. For example, a school meeting anticipated reading scores in grades 3 and 4 while not meeting the anticipated reading score in grade 5 was assigned a composite score of (+1). Based upon composite scores, schools were then divided into two categories. Category 1 schools will be identified as those schools which met or surpassed anticipated CTBS reading achievement scores in grades 3 through 6 based upon TCS prediction. Category 2 schools were identified as those schools which did not meet anticipated total reading achievement scores in grades 3 through 6 based upon TCS prediction.

In order to form the final sample, 20 schools were selected from Category 1 and 20 schools from Category 2. A total of 40 schools composed the final sample. To insure equivalent groups, schools in the final sample were stratified and matched on the basis of composite scores. For example: for every (+4) school in Category 1 a (-4) school was selected from Category 2. A distribution of sample schools by category and composite score is shown in Table 1.

In order to further control for extraneous variables, schools in the final sample were classified by the percentage of low income students enrolled and matched as closely as possible on TCS anticipated scores and the socioeconomic status of the general school population. The percentage of low income students in sample schools was based upon the number of students that qualified for the free and reduced school lunch program. Qualification for this program is based upon family income and is reported annually on the School Economic Survey Form which is a documented portion of the Title I project proposal submitted to the Florida Department of Education. A distribution of sample schools by category and percentage of low income students is shown in Table 2. This sampling procedure further maximizes the potential for generalizability and external validity (Ary, Jacobs, Razavieh, 1979).

The principal and five randomly selected teachers from each of the 40 sample schools created the data source for this study. The principal of each sample school was personally contacted and agreed to participate in the study. In an effort to ensure sufficient teacher data from individual schools, 7 teachers (five plus two alternates) from each school were randomly selected to receive and complete the questionnaire. A maximum of 5 teacher responses, however, were accepted from any individual school for use in this study. Teacher responses were recorded by date received. The first (5) questionnaires postmarked and returned from an individual school were tabulated for use in this study.

TABLE 1

Distribution of Sample Schools
By Category and Composite Reading Score
Reflecting Performance on 1983 CTBS
Reading Achievement Test

	Category 2 Schools				Category 1 Schools			
Composite Score	-4	-3	-2	-1	+1	+2	+3	+4
Number of Schools per Composite Score	1	7	2	10	10	2	7	1

TABLE 2

Distribution of Sample Schools
by Category and Percentage of Low Income Students

Percentage of Low Income Students	Distribution of Schools	
	Category 1	Category 2
80-90	3	3
70-79	1	1
60-69	0	2
50-59	4	3
40-49	2	4
30-39	3	1
20-29	5	4
10-19	2	2

Instrumentation

Described in this section are the instruments which were used in the investigation of perceived leadership behaviors and demographic characteristics of principals in elementary schools as they relate to student achievement in reading. Instruments described in this section are: (1) The Comprehensive Test of Basic Skills (CTBS), (2) The Test of Cognitive Skills (TCS), (3) The Involvement Questionnaire, and (4) The Demographic Information Questionnaire.

Comprehensive Test of Basic Skills (CTBS)

In April 1983 all Hillsborough County Public School students in grades K through 9 were administered a Comprehensive Test of Basic Skills Form U (CTBS-U), a new series of achievement tests. Published by CTB/McGraw-Hill, the CTBS-U was nationally normed and standardized in 1980-81 by administration to about 180,000 students representing a cross-section of the student population throughout the country. The purpose of CTBS-U is to provide a valid measurement of academic basic skills in reading, spelling, language, mathematics, reference skills, science, and social studies. To identify the educational objectives that would be measured, comprehensive reviews were made of state and district curriculum guides, textbook series, instructional programs, and norm-referenced and criterion-referenced assessment instruments. The content areas resulting from this analysis are defined in statements that describe categories of skills, called category objectives.

CTBS-U is intended to measure a student's understanding of broad concepts as developed by all curricula rather than the understanding of content specific to any particular instructional program. Test performance should also reflect the student's skills in effective use of information. These cognitive skills, implicit in process categories derived in part from Bloom's taxonomy (Bloom, 1976), include recalling previously learned information, using inferential reasoning, and evaluating. Specifications for item development were designed to ensure comprehensive coverage of the content and process categories. This item classification information is useful for identifying a student's or a school's educational strengths and instructional needs (Burket, 1982).

The definition and refinement of content specifications were continuous processes during the development of CTBS-U. After the initial curricular reviews, content coverage was verified as part of the procedures for development of items, analysis of tryout data, and selection of final test items. The procedures were designed to ensure that stimulus materials and items met the content criteria established for the tests, were well constructed, and were written in language appropriate for the various levels of testing. All test items were edited according to recognized principles of test construction. Several methods were applied to ensure the accuracy, currency, and curricular relevance of the materials developed for CTBS-U (Burket 1982).

Current curriculum guides were obtained from state departments of education and from major cities and large school districts throughout the country. The content of recently published textbook series and instructional programs was also examined. To provide a large pool of items for final test selection, three times as many items as would be needed were developed. A staff of professional item writers, most of them experienced teachers, researched and wrote items and passages to be used. All items and test directions were carefully reviewed for content and editorial accuracy.

Vocabulary difficulty was controlled by reference to core vocabularies in reading (O'Rourke, 1976). Close adherence to vocabulary specifications assured that all words used were appropriate for the target grades for each test level. In addition, the difficulty and the length of passages were controlled by applying widely-used readability formulas (Spache, 1974; Fry, 1972). When passages were selected for the final tests, an automated procedure (Frankle, 1980) was applied to recalculate the readability again based on the Fry and Spache formulas.

The teachers who administered the experimental edition of CTBS-U were asked to review the content, illustrations, instructions, and time limits for the materials they administered to provide comments. Many of their recommendations were incorporated in the final materials.

During the development of CTBS-U, careful attention was given to questions of ethnic, racial, socioeconomic, age, and gender bias. All experimental materials were also reviewed by professionals in the educational community who represented various ethnic groups. The reviewers were asked to consider and comment on the appropriateness of language, subject matter, and representation of people.

Test of Cognitive Skills (TCS)

In conjunction with the CTBS-U, students in grades 3-6 also took the Test of Cognitive Skills (TCS), a series of aptitude tests measuring verbal and non-verbal reasoning ability. The TCS was nationally standardized at the same time as the CTBS-U. A score on TCS is not intended as a measure of innate ability; it is an indicator of academic aptitude and as such should not be generalized to situations for which it is inappropriate. TCS content reflects abilities important to learning, such as problem solving, evaluating, discovering relationships, and remembering. These abilities are important factors in assessing reading skills. To the extent that TCS measures these abilities, it should be useful in predicting success on CTBS. TCS norms compare the ability level of a student not with the entire population but only with those who are also in school.

The scale score is the basic score for TCS. This score is especially appropriate for research studies and statistical analyses, but it is not well suited to direct interpretation of individual performance on TCS. The scale score is therefore converted to percentile ranks, stanines, and the Cognitive Skills Index. The appropriate use of these derived scores permits meaningful inferences to be drawn from a student's performance on TCS.

TCS indicates the level of performance that may be expected on CTBS and in school performance. When comparisons are to be made among students in a single class or grade concerning relative ability to deal with the curriculum at that grade, the grade percentile rank is the most appropriate score to use.

Anticipated achievement scores have been devised to assist teachers, counselors, students, parents, and administrators in comparing an individual student's level of achievement with that of students of similar characteristics. To facilitate comparison of anticipated and obtained achievement scores, the anticipated achievement scores are reported in combination with the CTBS achievement battery.

TCS scores are intended as only descriptions of a particular performance by the individual or group. From these descriptions, inferences about the abilities of the students may be made. The fact that such inferences may not represent an individual's true status is taken into account by means of the standard error of measurement (SEM) (Burket, 1982).

It is statistically assumed that measurement error is associated with any test score. The standard error of measurement is an estimate of the amount of error to be expected in a particular score from a particular test. This statistic provides a range within which a student's true score is likely to fall. Therefore, an obtained score should be regarded not as an absolute value but as a point within a range that probably includes a student's true score. A student's true score is the hypothetical average score that would result if the test could be administered repeatedly without practice or fatigue effects. It is expected that 95 percent of the time the obtained score would fall within two standard errors of the true score. The TCS is used to anticipate performance on the CTBS. An individual student's anticipated achievement score represents an estimate of the average score for students having similar attributes in common. The difference between a student's anticipated and obtained scores is an estimate of the extent to which the student's obtained achievement falls below or above the typical score of students with similar attributes (Burket et al., 1982).

Additional research information relative to the validity and reliability of the TCS/CTBS testing battery is reported in rigorous detail by Burket et al. (1982).

Involvement Questionnaire

After careful consideration was given to the validity and reliability of available instruments applicable to the focus of this study, a questionnaire instrument was selected for use in the data gathering process. The selected instrument was developed and field tested as part of a 3 year study which dealt with measuring perceived levels of principal involvement in low socioeconomic elementary school reading programs (Combs, 1982). The 29 item questionnaire contained in Appendix A, was originally field tested by 20 principals and 328 teachers. The questionnaire which was administered to principals and teachers contains 29 items in 3 subscales measuring perceived levels of involvement between (1) principals and teachers, (2) principals and students, and (3) principals and parents.

Instrument items are concerned with the perceived level of involvement of teachers, students, and parents with the principal in the elementary school reading program. Each item contains a six-point bipolar numerical rating scale ranging from one to six for responding (Ary et al., 1979). On representing "no persons" involved and six representing "all persons" involved. Combs (1982) developed the Involvement Questionnaire in conjunction with fifteen educators from the fields of reading and educational leadership who reviewed each item for feasibility, clarity, content, validity and scale of responding. Recommendations and suggestions were incorporated into each item prior to original field testing. Individual questionnaire items were strategically designed to reflect the content of empirical studies. Evidence in the form of a reference list indicates a specific research base for each questionnaire item. The reference list is included in Appendix B.

Relative to this study the Involvement Questionnaire was then reviewed for content, feasibility and use by the Assistant Superintendent for Instruction, Hillsborough County Schools and a committee of eleven county level instructional directors. The Involvement Questionnaire was again field tested with a number of Hillsborough County principals and teachers not in the sample group for feasibility and specific use in this study.

A correlation coefficient for each subscale was calculated in order to determine split-half reliability. The odd-even method was utilized for the purpose of analyzing each of the 3 subscales. Each half-subscale coefficient was adjusted using the Spearman-Brown Formula. This calculation yielded the whole test reliability for each subscale. Reliability coefficients are reported for individual subscales as follows:

Teacher Subscale	.82
Student Subscale	.79
Parent Subscale	.88

To further validate the Involvement Questionnaire relative to this study, the instructional supervisors of six randomly selected sample schools were asked to complete the questionnaire. An examination of these responses indicated the supervisory perceptions of the principals' involvement behavior relative to the reading program. A stratified random sampling procedure was used in the selection of the six sample schools in order to insure that three schools from Category 1 and three schools from Category 2 were selected.

The principal of each of the 40 sample schools and 7 teachers randomly selected from each sample school were identified to complete the questionnaire (2 as alternates to ensure an adequate per school data base). Approximately 10 minutes were needed by each respondent to complete the questionnaire.

Demographic Information Questionnaire

A Demographic Information Questionnaire developed by the writer (Appendix C) provided the format and instrument for recording principal and teacher demographic information. The Demographic Information Questionnaire was field tested and reviewed by a sample of Hillsborough County Principals and teachers for feasibility and content. Recommendations were used to modify the questionnaire to its present form. Each principal and teacher was encouraged to describe the reading program of his or her school.

Content of the instrument reflects the various elements of a complete reading program. Elements include planning for, implementing and evaluating the school reading program. Each respondent was asked to provide specific information concerning training, experience, and preparation in the teaching and evaluation of reading. Each individual principal was contacted personally prior to receiving the questionnaire instruments and appraised of the importance of the requested information as well as an extension of appreciation for the additional time necessary to comply with this request. Approximately 10 minutes was necessary to complete the Demographic Information Questionnaire. Demographic information is summarized and reported as a part of this study.

Data Collection

Data were collected during a five week period beginning the week of March 12, 1984, and arranged through the tabulation of principal and teacher responses to two questionnaires identified for use in this study. The two questionnaires were: (1) The Involvement Questionnaire and (2) The Demographic Information Questionnaire. Respondents were identified as 40 elementary school principals and 186 elementary school teachers from 40 sample schools in Hillsborough County, Florida. The initial mailing packet to all respondents included the following items: (1) an introductory letter describing the significance of the study, (2) a letter from the Director of Staff Development, Hillsborough County Schools, indicating the necessary approval to conduct research in Hillsborough County Schools, (3) The Involvement Questionnaire, (4) The Demographic Information Questionnaire, and (5) a self-addressed envelope for the purpose of returning necessary items.

Questionnaires were coded to permit follow up correspondence with those individuals identified for the initial mailing and neglecting to respond. As a result of the initial mailing, 31 principals and 121 teachers responded within two weeks. A second mailing was scheduled for those who neglected to initially respond. Once again, packets containing all materials used in the initial correspondence were mailed to all initial non-respondents and alternates. An additional letter was included with follow up packets which further emphasized the importance of the study and encouraged immediate responses. An additional 7 principals and 61 teachers responded. Telephone contact with each non-respondent was attempted in order to bring focus to the question of non-respondent bias or to any significant factor which could ultimately effect the generalizability of the findings of this study. A distribution of non-respondent data, based upon verbal communication, is shown in Table 3. As a result of the telephone follow-up, the final 2 principals and 15 additional teachers responded.

In all, Questionnaire packets were mailed to 280 teachers and 40 principals identified in sample schools. A total of 197 teachers and all 40 principals responded. Eleven teacher questionnaires were eliminated from the sample in that a maximum of 5 teachers were permitted to represent any individual school faculty. Questionnaires were eliminated based upon the first five received per school. Postmarks were recorded and used consistently in this process. Thirty schools were represented in the study by 1 principal and 5 teachers each. Six schools were represented by 1 principal and 4 teachers each. Four schools were represented by 1 principal and 3 teachers each. Schools in Category 1 were comparable to schools in Category 2 relative to school size, student enrollment, and size of faculty. The number of school faculty members representing each sample category ranged from 14 to 39.

Each of the three schools represented by 3 teachers had faculties of less than 18 teachers.

The analysis of data for this study was based upon the responses of 20 principals and 93 teachers identified in Category 1 schools and 20 principals and 93 teachers identified in Category 2 schools. A total of 40 principals and 186 teachers generated the data for this study.

Data relative to the identification of school achievement categories was extracted from the Annual Achievement Report: 1983 Spring Testing, Hillsborough County Schools.

Information necessary for the identification of schools meeting sample criteria (student mobility-administrator residency) was made available through the office of Instructional Personnel and the office of Pupil Administrative Services, Hillsborough County Schools.

TABLE 3

Distribution of Non-Respondent Data
Based Upon Verbal Communication

Non-Respondent School Category	Reasons Assessed for Non-responding: Did not wish to Participate	Professional Absence (Leave, etc.)	Unknown	Total
Category 1	25	4	5	34
Category 2	27	9	13	49

NOTE: (1) ll 40 principals identified for the purpose of this study were personally contacted and responded.

(2) Non-respondents in the unknown category either could not be contacted, did not wish to discuss reasons for not responding, or would not return calls.

Data Analysis

To guide the analysis of data relative to examining the relationship between perceived principal leadership behaviors, principal demographic characteristics and student achievement in reading, certain hypotheses were formulated. These hypotheses are stated in the null form and were tested for significance at the. 05 level.

In order to facilitate the description of hypothesis testing, the following information is applied:

1. Respondent groups are identified as principals and teachers.
2. Category 1 schools are those schools in the sample which met or surpassed anticipated CTBS total reading achievement scores based upon TCS prediction.
3. Category 2 schools are those schools in the sample which did not meet anticipated total reading achievement scores based upon TCS prediction.

Hypothesis I: There is no significant difference in the levels of leadership behavior in the school reading program between principals of category 1 elementary schools and principals of category 2 elementary schools when comparing the perceptions of:

(a) Category 1 principals with Category 2 principals and teachers.
(b) Category 1 principals with Category 2 principals.
(c) Category 1 teachers with Category 2 teachers.
(d) Category 1 principals with Category 1 teachers.
(e) Category 2 principals with Category 2 teachers.

Hypothesis II: There is no significant relationship between the level of student reading achievement in schools and the demographic characteristics of the principal when comparing pre-determined student achievement levels with:

(a) Years of experience as the elementary principal

(b) Date of most recent degree/degrees held by the elementary principal

(c) Major certification area of the elementary principal

(d) Number of college courses in reading completed by the elementary principal

(e) Years of elementary teaching experience of the elementary principal

(f) Number of inservice training courses in reading completed by the elementary principal

After the collection of data on the Involvement Questionnaire, mean scores and standard deviations were calculated for each respondent group and are shown in Table 4. Mean scores were then computed for Category 1 and Category 2 respondents on individual items using category membership as the grouping factor. Mean scores and standard deviations by category membership to individual questionnaire items are shown in Tables 5 and 6.

Mean scores for Category 1 and Category 2 respondents were also computed for the teacher involvement subscale, the student involvement subscale, and the parent involvement subscale. Subscale data are shown in Tables 7 and 8.

In order to examine the significance of the relationships described in Hypothesis I, data were grouped to facilitate 5 "t" tests for independent samples. A "t" ratio was calculated to compare the significance of the difference between respondent group means as follows:

1. Comparison: Category 1 principals and teachers with Category 2 principals and teachers.
2. Comparison: Category 1 principals with Category 2 principals.
3. Comparison: Category 1 teachers with Category 2 teachers.
4. Comparison: Category 1 principals with Category 1 teachers.
5. Comparison: Category 2 principals with Category 2 teachers.

The results of each "t" test are described in detail in the Presentation of Data.

TABLE 4

Mean Scores and Standard Deviations by
Respondent Group to the Involvement Questionnaire

Respondent Group	Mean	Standard Deviation
Category 1 Principals	132.05	18.76
Category 2 Principals	129.75	18.70
Category 1 Teachers	125.96	20.66
Category 2	89.45	30.66

TABLE 5

Principal Mean Scores and Standard Deviations
by Category to Individual Involvement Questionnaire Items

Item Number	Category 1 Principals		Category 2 Principals	
	Mean Score	Standard Deviation	Mean Score	Standard Deviation
1	4.40	1.29	4.60	1.45
2	5.85	.33	5.95	.43
3	4.70	1.12	5.00	1.26
4	4.15	1.49	4.15	1.49
5	4.30	1.50	4.15	1.58
6	4.30	1.47	4.40	1.51
7	4.95	1.09	5.10	1.11
8	4.95	1.21	5.45	1.31
9	5.64	1.04	5.40	1.04
10	4.70	1.64	4.75	1.66
11	5.50	.89	5.85	.95
12	4.80	1.52	4.80	1.56
13	4.90	1.38	5.25	1.38
14	4.85	1.40	5.50	1.42
15	4.20	1.32	3.85	1.30
16	3.55	1.27	3.45	1.33
17	5.65	1.11	5.00	1.13
18	4.45	1.22	4.15	1.22
19	4.50	1.20	4.05	1.28
20	4.50	1.24	3.65	1.22

(continued on next page)

Table 5 Continued

Principal Mean Scores and Standard Deviations
by Category to Individual Involvement Questionnaire Items

Item Number	Category 1 Principals		Category 2 Principals	
	Mean Score	Standard Deviation	Mean Score	Standard Deviation
21	3.80	1.15	3.70	1.15
22	4.94	1.13	4.95	1.09
23	5.10	1.05	4.90	1.03
24	3.25	1.36	3.20	1.52
25	5.20	1.06	5.00	1.10
26	4.55	1.50	4.35	1.66
27	2.90	1.33	2.50	1.47
28	3.25	1.43	3.00	1.41
29	4.20	1.40	4.10	1.48

TABLE 6

Teacher Mean Scores and Standard Deviations
by Category to Individual Involvement Questionnaire Items

Item Number	Category 1 Principals		Category 2 Principals	
	Mean Score	Standard Deviation	Mean Score	Standard Deviation
1	4.26	1.50	3.32	1.96
2	5.69	1.38	4.23	1.88
3	4.58	1.71	3.26	2.07
4	4.45	1.81	3.14	2.03
5	3.95	1.87	3.11	1.93
6	4.22	1.85	3.01	1.97
7	4.63	1.70	3.37	2.08
8	5.04	1.83	3.74	1.87
9	5.41	1.71	3.97	2.01
10	3.95	1.71	2.94	2.13
11	5.71	1.77	3.92	2.10
12	4.74	1.91	3.23	2.19
13	5.43	1.75	3.76	2.15
14	5.03	1.80	3.30	2.14
15	3.91	1.81	2.78	1.89
16	3.66	1.60	2.49	2.06
17	5.31	1.63	3.84	2.03
18	4.02	1.57	2.88	1.77
19	3.82	1.54	2.83	1.78

(continued next page)

TABLE 6 Continued

Teacher Mean Scores and Standard Deviations
by Category to Individual Involvement Questionnaire Items

Item Number	Category 1 Principals		Category 2 Principals	
	Mean Score	Standard Deviation	Mean Score	Standard Deviation
20	3.65	1.59	2.41	1.85
21	3.49	1.38	2.60	1.84
22	4.23	1.71	3.06	1.99
23	4.19	1.71	2.91	1.89
24	3.44	1.51	2.51	1.73
25	4.76	1.70	3.23	2.12
26	4.15	1.77	2.82	1.97
27	3.01	1.35	1.99	1.67
28	3.01	1.37	1.98	1.59
29	4.18	1.71	2.83	2.09

TABLE 7

Mean Responses by Category 1 Respondents
To the Teacher Involvement Subscale, The Student Involvement
Subscale, and the Parent Involvement Subscale

Subscale	Mean Response Category 1 Principals	Mean Response Category 1 Teachers	Mean Response Category 1 Total
Teacher Involvement (17 Items)	81.40	79.97	80.69
Student Involvement (6 Items)	27.30	23.40	25.35
Parent Involvement (6 Items)	23.35	22.59	22.97

TABLE 8

Mean Responses by Category 2 Respondents
To the Teacher Involvement Subscale, The Student Involvement
Subscale, and the Parent Involvement Subscale

Subscale	Mean Response Category 2 Principals	Mean Response Category 2 Teachers	Mean Response Category 2 Total
Teacher Involvement (17 Items)	82.20	57.41	69.41
Student Involvement (6 Items)	25.4	16.70	21.05
Parent Involvement (6 Items)	22.15	15.34	18.75

The examination of principal demographic variables described in Hypothesis II was conducted by using the chi-square test of independence. Principal demographic data were classified as belonging to one of two achievement dimensions. Within each dimension, 6 demographic variables were examined. An individual chi-square test of independence was conducted for each of the following demographic areas:

1. Years of experience as the elementary principal.
2. Date of most recent degree held by the elementary principal.
3. Major certification area of the elementary principal.
4. Number of college courses in reading completed by the elementary principal.
5. Years of elementary teaching experience of the elementary principal.
6. Number of in-service training courses in reading completed by the elementary principal.

Chi-square tables describing the significant findings in the examination of each demographic area are included in the Presentation of Data.

In the final analysis, data are summarized and presented to highlight significant findings of the study.

In as much as the design of the study is ex post facto, the interpretation of the findings to inferences about the relationship of the variables is restricted. Cause/effect relationships were not determined.

PRESENTATION AND DISCUSSION OF DATA

Presentation of Data

Included in this section are a description of the results of the analysis of data and a discussion of the findings of this study.

The purpose of the analysis and description of data was to examine the relationship between principal leadership behaviors, principal demographic variables, and student achievement in reading.

Data were analyzed according to the following questions and hypotheses posed:
Questions:

1. Are there differences in the perceived leadership behaviors of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?
2. Are there differences in the demographic characteristics of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?

Hypotheses:

The general hypothesis examined in this study was that a relationship exists between the principal's leadership behavior relative to the elementary school reading program and the reading achievement levels of students within the program. In order to facilitate the description of the hypotheses, the following information is applied:

1. Respondent groups are identified as principals and teachers.
2. Category 1 schools are those schools in the sample which met or surpassed anticipated CTBS total reading achievement scores based upon TCS prediction.
3. Category 2 schools are those schools in the sample which did not meet anticipated total reading achievement scores based upon TCS prediction.

The following specific research hypotheses are stated to promote clarity and testability in analyzing data.

Hypothesis I: Principals of category 1 elementary schools will demonstrate significantly higher levels of leadership behavior in the school reading program than principals of category 2 elementary schools when comparing the measured perceptions of:

a. Category 1 principals and teachers with Category 2 principals and teachers.
b. Category 1 principals with Category 2 principals.
c. Category 1 teachers with Category 2 teachers.
d. Category 1 principals with Category 1 teachers.
e. Category 2 principals with Category 2 teachers.

Hypothesis II: There is a significant relationship between the level of student reading achievement in schools and the demographic characteristics of the principal when comparing student reading levels with:
a. Years of experience as the elementary principal.
b. Date of most recent degree/degrees held by the elementary principal.
c. Major certification area of the elementary principal.

d. Number of college courses in reading completed by the elementary principal.
e. Years of elementary teaching experience of the elementary principal.
f. Number of inservice training courses in reading completed by the elementary principal.

Procedure: Forty principals and 186 teachers representing 40 elementary schools in Hillsborough County, Florida responded to two questionnaires. Data from the Involvement Questionnaire which is used to indicate the degree of involvement of a principal in the school reading program, were analyzed in the examination of Hypothesis I. The Demographic Information Questionnaire was used to collect demographic information which was analyzed in the examination of Hypothesis II.

Each of the hypotheses is restated in the null form to facilitate testing and serve as a basis for analysis and discussion. In order to examine each of the five specific considerations included in Hypothesis I, five comparisons were made utilizing data collected on the Involvement Questionnaire. A "t" test for independent samples was the major form of data analysis utilized for Hypothesis I. Data were arranged according to respondent group and category as outlined in each sub-comparison of Hypothesis I.

Hypothesis Ia: There is no significant difference in the levels of leadership behavior in the school reading program between principals of category 1 elementary schools and principals of category 2 elementary schools when comparing the perceptions of category 1 principals and teachers with the perceptions of category 2 principals and teachers.

The mean score for principals was combined with the mean score for teachers within each category to yield one score that represented each school category in the study.

The first comparison was made by comparing the combined mean score response of principals and teachers in category 1 schools with the combined mean score response of principals and teachers in category 2 schools. Graphically, the first comparison is shown in Figure 1.

A "t" test for independent samples was performed to compare means of respondent groups to determine the probability of a significant difference between groups. Results indicated that the mean scores of comparison groups were significantly different at the .05 level. The mean score for category 1 principals and teachers was 127.04. The mean score for category 2 principals and teachers was 96.58. The observed "t" ratio was 6.49 (df 224). The critical value necessary for rejection was 1.960 and the standard error of the difference between means was 4.69. Hypothesis Ia was rejected at the .05 level of significance.

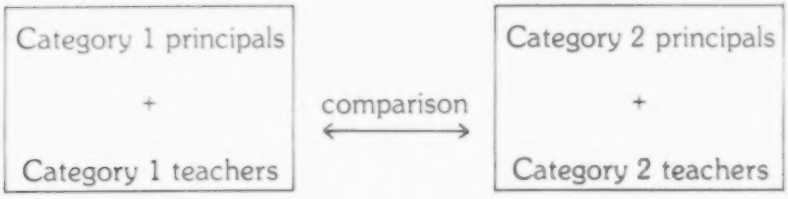

Figure 1. Category 1 Respondents compared with Category 2 Respondents.

Hypothesis Ib: There is not significant difference in the levels of leadership behavior in the school reading program between principals of category 1 elementary schools and principals of category 2 elementary schools when comparing the perceptions of category 1 principals with the perceptions of category 2 principals.

The second comparison was made by comparing the mean score response of principals in category 1 with the mean score response of principals in category 2. The second comparison is graphically shown in Figure 2.

A "t" test for independent samples was performed to compare means of respondent groups to determine the probability of a significant difference between groups. Results indicated that there was no significant difference in the mean response of comparison groups at the. 05 level. The mean score for category 1 principals was 129.75. The observed "t" ratio was. 378 (df 38). The critical value necessary for rejection was 2.02 and the standard error of the difference between means was 6.08. Hypothesis Ib was not rejected.

Hypothesis Ic: There is no significant difference in the levels of leadership behavior in the school reading program between principals of category 1 elementary schools and principals of category 2 elementary schools when comparing the perceptions of category 1 teachers with the perceptions of category 2 teachers.

The third comparison was made by comparing the mean score response of all teachers in category 1 with the mean score response of all teachers in category 2. The third comparison is graphically shown in Figure 3.

A "t" test for independent samples was performed to compare means of respondent groups to determine the probability of a significant difference between groups. Results indicated that the mean scores of comparison groups were significantly different at the. 05 level. The mean score for category 1 teachers was 125.96. The mean score for category 2 teachers was 89.45. The observed "t" ratio was 6.36 (df 184). The critical value necessary for rejection was 1.960 and the standard error of the difference between means was 5.74. Hypothesis Ic was rejected at the. 05 level of significance.

Hypothesis Id: There is no significant difference in the levels of leadership behavior in the school reading program between principals of category 1 elementary schools and principals of category 2 elementary schools when comparing the perceptions of category 1 principals with the perceptions of category 1 teachers.

The fourth comparison was made by comparing the mean score response of principals in category 1 with the mean score response of teachers in category 1. The fourth comparison is graphically shown in Figure 4.

A "t" test for independent samples was performed to compare means of respondent groups to determine the probability of a significant difference between groups. Results indicated that the mean scores of comparison groups were not significantly different at the. 05 level. The mean score for category 1 principals was 12.05. The mean score for category 1 teachers was 125.96. The observed "t" ratio was. 847 (df 111). The critical value necessary for rejection was 1.980 and the standard error of the difference between means was 7.19. Hypothesis Id was not rejected.

Hypothesis Ie: There is no significant difference in the levels of leadership behavior in the school reading program between principals of category 1 elementary schools and principals of category 2 elementary schools when comparing the perceptions of category 2 principals with the perceptions of category 2 teachers.

The fifth comparison was made by comparing the mean score response of all principals in category 2 with the mean score response of all teachers in category 2. The fifth comparison is graphically shown in Figure 5.

Figure 2. Category 1 Principals compared with Category 2 Principals.

Figure 3. Category 1 Teachers compared with Category 2 Teachers.

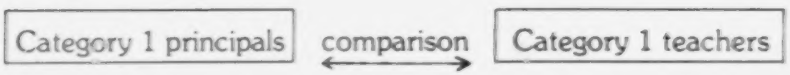

Figure 4. Category 1 Principals compared with Category 1 Teachers.

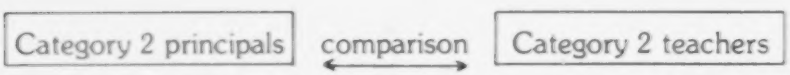

Figure 5. Category 2 Principals compared with Category 2 Teachers.

A "t" test for independent samples was performed to compare means of respondent groups to determine the probability of a significant difference between groups. Results indicated that the mean scores of comparison groups were significantly different at the. 05 level. The mean score for category 2 principals was 129.75. The mean score for category 2 teachers was 89.45. The observed "t" ratio was 3.84 (df 111). The critical value necessary for rejection was 1.980 and the standard error of the difference between means was 10.51. Hypothesis Ie was rejected at the. 05 level of significance.

Hypothesis II: There is no significant relationship between the level of student reading achievement in schools and the demographic characteristics of the principal when comparing student reading achievement levels with:

(a) Years of experience as the elementary principal.
(b) Date of most recent degree/degrees held by the elementary principal.
(c) Major certification area of the elementary principal.
(d) Number of college courses in reading completed by the elementary principal.
(e) Years of elementary teaching experience of the elementary principal.
(f) Number of inservice training courses in reading completed by the elementary principal.

In order to examine Hypothesis II, demographic information collected from all 40 principals in the study was recorded on the principal's Demographic Information Questionnaire and was summarized and analyzed. Information was grouped using category membership as the grouping factor.

In order to determine whether demographic information relative to principals of category 1 schools differed significantly from demographic information relative to principals of category 2 schools, a chi-square test of independence was utilized.

The chi-square test of independence was used because schools within the study were identified in two achievement dimensions. Within each of these dimensions, the classification of the demographic variables was examined. The chi-square test of independence permitted the examination of the relationship between sample dimensions relative to each of the demographic variables identified (Ary, Jacobs, Razavieh, 1979).

Chi-square distributions, data tables and the results of the six chi-square procedures are presented and discussed by topic as follows:

Years of Experience as Elementary Principal

Principals of both categories of elementary schools in the final sample represented varying years of experience as principal and years as principal in the identified school. A distribution of experience of principals in category 1 schools and principals of category 2 schools is shown in Table 9.

Principals of category 1 and category 2 schools demonstrated no significant difference in the number of years experience as an elementary principal. The chi-square test yielded cell differences that were not significant, as shown in Table 9. The obtained value of chi-square was. 732 (df 2). The critical value necessary for rejection was 5.991. Hypothesis IIa was not rejected.

Date of Most recent Degree/Degrees Held by Elementary Principal

In that all the principals of schools within the population for this study were required to hold a Master's Degree and Certification in Elementary Education and Administration/Supervision, the date of the most recent degree completed was examined for significant differences. Principals in both school categories identified for the purpose of this study represented varying years since degree completion. Principal responses were recorded in three major time blocks. These were: 1970 and prior, 1971-1979, and 1980 to current. A distribution of the most current degree completion dates of category 1 and category 2 principals is shown on Table 10. Principals of category 1 and 2 schools demonstrated no significant difference relative to the date of completion of most recent college degree. The chi-square test yielded cell differences that were not significant, as shown in Table 10A. The obtained value of chi-square was 1.152 (df 2). The critical value necessary for rejection was 5.991. Hypothesis IIb was not rejected.

Major Certification Area of the Elementary Principal

Principals of both school categories identified for the purposes of this study represented varied areas of certification. None of the principals in the sample had major certification in reading. Three principals did have reading certification as a secondary area. Two were in category 1 and one in category 2. A distribution of the major certification areas of the elementary principals identified by category in this study is shown in Table 11.

Principals of category 1 and category 2 schools demonstrated no significant difference in areas of certification. The chi-square test yielded cell differences that were not significant, as shown in Table 11a. The obtained value of chi-square was 1.78 (df 2). The critical value obtained in the chi-square test of independence Hypothesis IIc was not rejected at the .05 level of significance.

TABLE 9

Distribution of Years of
Experience as Elementary Principal

Years of Experience	Category 1 Principals	Category 2 Principals
20+	4	6
10-19	9	9
1-9	7	5

TABLE 9A

Chi-Square Test for Years
of Experience as Elementary Principal

Years of Experience	Principals of Category 1 Schools		Principals of Category 2 Schools	
	Observed	Expected	Observed	Expected
20+	4.00	5.00	6.00	5.00
10-19	9.00	9.00	9.00	9.00
1-9	7.00	6.00	5.00	6.00

Chi-square total = .732, df-2; not significant @ .05.

TABLE 10

Distribution of Date of Most
Recent Degree Held by the Elementary Principal

Year of Degree Completion	Category 1 Principals	Category 2 Principals
1980 to Current	1	1
1971-1979	7	4
1970 and Prior	12	15

TABLE 10A

Chi-Square Test for Date of Most
Recent Degree Held by the Elementary Principal

Year of Degree Completion	Principals of Category 1 Schools		Principals of Category 2 Schools	
	Observed	Expected	Observed	Expected
1980 to Current	1.00	1.00	1.00	1.00
1971-1979	7.00	5.50	4.00	5.50
1970 and Prior	12.00	13.50	15.00	13.50

Chi-square total = 1.152, df = 2; not significant @ .05.

Number of College Courses in Reading Completed by the Elementary Principal

The principal's training in reading was also a point of examination in this study. Four principals had taken extensive coursework in reading but had not sought major certification in reading.

To determine whether principals of category 1 and category 2 schools differed significantly in the number of college courses completed in reading, the chi-square test was again used. The number of college reading courses completed was categorized into four groups: 1-3 courses, 4-6 courses, 7-9 courses, and 10 or more courses. Principals were categorized by category 1 or category 2 schools. A distribution of college courses completed by category 1 and category 2 principals is shown in Table 12. Observed and expected frequencies for completed courses in reading are presented in Table 12A.

Principals of category 1 and category 2 schools did not differ significantly in the number of college courses completed in reading. The chi-square test did not yield cell frequencies that were significantly different than expected. The obtained value of chi-square was 2.356 (df 3). The critical value necessary for rejection was 7.815. Hypothesis IId was not rejected.

TABLE 11

Distribution of Major
Certification Area of the Elementary Principal

Major Area of Certification	Category 1 Principals	Category 2 Principals
Elementary Education	11	15
Administration/ Supervision	7	4
Reading	2	1

TABLE 11A

Major Certification Area of the Elementary Principal

Major area of Certification	Principals of Category 1 Schools		Principals of Category 2 Schools	
	Observed	Expected	Observed	Expected
Elementary Education	11.00	13.00	15.00	13.00
Administration/ Supervision	7.00	5.50	4.00	5.50
Reading	2.00	1.50	1.00	1.50

Chi-square total = 1.78, df = 2; not significant @ .05.

TABLE 12

Distribution of College Courses
in Reading Completed by the Elementary Pricipal

Number of college Reading Courses	Category 1 Principals	Category 2 Principals
10+	2	2
7-9	5	2
4-6	6	10
1-3	7	6

TABLE 12A

Chi-Square Test for College Courses in Reading
Completed by the Elementary Principal

Number of college Reading Courses	Principals of Category 1 Schools		Principals of Category 2 Schools	
	Observed	Expected	Observed	Expected
10+	2.00	2.00	2.00	2.00
7-9	5.00	3.50	2.00	3.50
4-6	6.00	8.00	10.00	8.00
1-3	7.00	6.50	6.00	6.50

Chi-square total = 2.356, df = 3; not significant @ .05.

Years of Elementary Teaching Experience of the Elementary Principal

Principals of both category 1 and category 2 schools varied widely in their teaching experiences. Principals in both groups ranged from no experience in teaching at the elementary level to having more than 20 years of elementary classroom experience. The distribution of principals by years of elementary teaching experience is shown in Table 13.

To determine whether category 1 and category 2 principals varied in years of experience more than was expected, the chi-square test was again utilized. Years of experience were divided into the following four categories: 0 years, 1-9 years, 10-19 years, 20 or more years. Observed and expected frequencies are shown in Table 13A.

Principals of category 1 and category 2 schools did not differ significantly in years of elementary teaching experience. Observed cell frequencies in the chi-square test were not significantly different from expected cell frequencies. The obtained value of chi-square was 3.04 (df 3). The critical value necessary for rejection was 7.815. Based upon the findings, Hypothesis IIe was not rejected at the. 05 level of significance.

TABLE 13

Distribution of Years of
Elementary Teaching Experience of the Elementary Principal

Years of teaching Experience	Category 1 Principals	Category 2 Principals
20+	2	0
10-19	8	8
1-9	10	11
0	0	1

TABLE 13A

Chi-Square Test for Years of Elementary
Teaching Experience of the Elementary Principal

Years of teaching Experience	Principals of Category 1 Schools		Principals of Category 2 Schools	
	Observed	Expected	Observed	Expected
20+	2.00	1.00	0.00	1.00
10-19	8.00	8.00	8.00	8.00
1-9	10.00	10.50	11.00	10.50
0	0.00	0.05	1.00	0.05

Chi-square total - 3.04, df = 3; not significant @ .05.

Number of Inservice Training Courses in Reading Completed by the Elementary Principal

Principals of category 1 and category 2 schools varied widely in the number of completed in-service training courses in reading. Principals in both groups ranged from 1 completed component to 10 or more. A distribution of the number of in-service courses completed by the principal in category 1 and 2 schools is shown in Table 14.

To determine whether category 1 and category 2 principals varied more than was expected for the number of in-service training courses in reading completed, the chi-square test was utilized. The number of courses completed by principals were divided into four categories: 1-3 courses, 4-6 courses, 7-9 courses, and 10 or more courses. Principals were examined by respondent category. Observed and expected frequencies are shown in Table 14A.

Category and category 2 principals did not differ significantly in the number of in-service training courses in reading completed. The chi-square test did not yield cell differences that were significantly different. The obtained value of chi-square test did not yield cell differences that were significantly different. The obtained value of chi-square was 2.438 (df=3). The critical value necessary for rejection was 7.815. Based upon the results of the chi-square test of independence Hypothesis IIf was not rejected at the .05 level of significance.

TABLE 14

Distribution of the Number of Inservice Training Courses in Reading Completed by the Elementary Principal

Number of Inservice Training Courses	Category 1 Principals	Category 2 Principals
10+	4	5
7-9	2	0
4-6	7	9
1-3	7	6

TABLE 14A

Chi-Square Test for Number of Inservice Training Courses in Reading Completed by the Elementary Principal

Number of inservice Training Courses	Principals of Category 1 Schools		Principals of Category 2 Schools	
	Observed	Expected	Observed	Expected
10+	4.00	4.50	5.00	4.50
7-9	2.00	1.00	0.00	1.00
4-6	7.00	8.00	9.00	8.00
1-3	7.00	6.50	6.00	6.50

Chi-square total = 2.438, df = 3; not significant @ .05.

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Descriptive Data from Principal and Teacher Demographic Questionnaires

In addition to data collected for the purpose of examining the questions and Hypothesis posed, demographic and descriptive data were collected concerning each school's reading program. These included planning for, implementing and evaluating the school's reading program. The following statements summarized the significant information not used in Hypothesis testing:

- Principals and teachers of both school categories indicated the use of a basal reading series as the predominant school approach to reading instruction.
- Principals and teachers of both school categories indicated the use of various planning techniques which included: total faculty planning, grade level planning and individual teacher planning for reading instruction.
- Category 1 schools were described by principals and teachers as having various forms of student grouping for instruction. These included: homogeneous by class and/or grade, heterogeneous, individualized and/or combinations within schools.
- Category 2 schools were described by principals and teachers as utilizing a singular student grouping pattern for reading instruction throughout a school or grade level. Based upon data from category 2 principals and teachers, category 2 schools are described as more structured by a singular school policy or pattern.
- Principals from both categories indicated that various reading groups or classes were assigned primarily based upon teacher strengths. However, a majority of teachers from both categories perceived the principal's assignment of reading groups and classes based upon other methods. These included: seniority, rotation and teacher choice.
- The majority of principals and teachers from categories 1 and 2 schools identified test score analysis and the examination of reading management materials as the primary methods of evaluating the school reading program.
- The majority of principals and teachers of both categories agreed that test score analysis and the examination of reading management materials were the methods equally used in the assessment of individual student progress in reading.
- Principals and teachers of both categories indicated that the evaluation of teacher competencies in teaching reading in their schools was accomplished primarily through classroom observation. However, 5 teachers from category 1 schools and 20 teachers and 1 principal from category 2 schools indicated that no evaluation was done relative to teacher competencies in the instruction of reading.

Supportive Data from Additional Observations

In order to gain insight and information relative to the accuracy and validity of principal and teacher responses on the Involvement Questionnaire, the curriculum supervisors of 6 randomly selected sample schools were asked to complete the Involvement Questionnaire. A stratified random sampling procedure was used to ensure the representation of 3 category 1 schools and 3 category 2 schools. Results indicated that the curriculum supervisor's perceptions of the principal's leadership behavior was most similar to the teacher's perceptions in both categories. The mean score obtained for category 1 schools was 126.33. The mean score obtained for category 2 schools was 101.33. A distribution of mean scores by category and respondent are shown in Table 15.

Discussion of Data

The purpose of analyzing and presenting the data associated with this study was to examine the relationship between leadership behaviors and demographic characteristics of principals and the reading achievement levels of the elementary students in their schools. Data were analyzed according to the questions posed. A literature search indicated the potential relationships associated with the variables cited. Based upon the questions and associated literature, hypothesis were generated and tested. The first hypothesis focused upon the principal's leadership behavior as it related to his level of involvement with teachers, students and parents in the school reading program. The second hypothesis examined the demographic variables associated with principals and their relationship to student reading achievement.

Throughout the discussion of data, the following information is applied:

1. Respondent groups are identified as principals and teachers.
2. Category 1 schools are those schools in the sample which met or surpassed anticipated CTBS total reading achievement scores based upon TCS prediction.
3. Category 2 schools are those schools in the sample which did not meet anticipated total reading achievement scores based upon TCS prediction.

Principal Leadership Behavior

The first question asked in this study was:

Are there differences in the perceived leadership behaviors of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?

Data were grouped to facilitate the examination of the relationship between the leadership behaviors of category 1 and category 2 principals and student achievement in reading through 5 comparisons.

The data analysis indicated that there were significant differences in the behaviors of category 1 and category 2 principals relative to the elementary school reading program, when comparing the measured perceptions of:

a. Category 1 principals and teachers with Category 2 principals and teachers
b. Category 1 teachers with Category 2 teachers
c. Category 2 principals with Category 2 teachers

The data analysis also indicated that no significant differences were found in the behaviors of category 1 and category 2 principals relative to the elementary school reading program, when comparing the measured perceptions of:

a. Category 1 principals with Category 2 principals
b. Category 1 principals with Category 1 teachers

In general, the findings indicated that principals of category 2 schools perceived themselves involved to a similar degree in the same behaviors as did the principals of category 1 schools. However, the teacher groups differed significantly in their ratings of the principals' involvement. Hotellings T-square multivariate procedure was used to examine the specific behaviors which distinguished category 1 principals from category 2 principals. Hotellings procedure permitted an unbiased examination of the specific differences between the perceptions of category 1 and category 2 teachers to individual principal behaviors. The level of significance was set at. 05.

Analyses indicated that category 1 teachers rated their principals significantly higher on 22 of 29 behaviors. The significant implications of each questionnaire item are described individually on the following page. Also of major interest in this study is that the responses of teachers of category 1 schools were in close agreement to the ratings of their principals, while teachers of category 2 schools were not in agreement with their principals. When the analysis of data grouped participants by category membership, the combination of principals' and teachers' ratings reduced the significantly large difference between principals and teachers of category 2 schools. The perceptions of the curriculum supervisors, relative to the principals leadership behavior, were closely associated with the teacher perceptions in both categories.

TABLE 15

Distribution of Mean Scores by Category and Respondent to the Involvement Questionnaire

	Mean Score		
	Principal	Respondent Teacher	Curriculum Supervisor
Category 1	132.05	125.96	126.33
Category 2	129.75	89.45	101.33

The implications of each Involvement Questionnaire item relative to category 1 and category 2 teachers responses are described as follows:

Involvement Questionnaire Item 1

The item was stated: How many teachers in your school work with the principal to identify goals for the school reading program?

The item analysis indicated that the perceptions of category 1 and 2 teachers were significantly different.

Category 1 teachers rated the extent of their principals' involvement with teachers in setting goals for the reading program as involving many teachers (4.26). However, most category 2 teachers did not perceive themselves as involved with the principal in the goal-setting process (3.32). The data indicated that teacher groups had significantly different perceptions of their principals behavior in setting goals for the reading program.

Involvement Questionnaire Item 2

The item was stated: How many teachers in your school are provided the materials necessary for instruction through the principal's budgeting process?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (5.69) indicated that they differed from category 2 teachers (4.23) in their perceptions of the principal's allocations for teacher needs and instructional materials.

Involvement Questionnaire Item 3

The item was stated: How many teachers in your school work with the principal to identify and plan for inservice needs in reading?

For inservice needs, significant differences were obtained between category 1 and category 2 teachers. Findings indicated that category 1 teachers (4.58) viewed their principals as significantly more involved in planning for inservice needs with teachers than did the teachers of category 2 (3.26).

Involvement Questionnaire Item 4

The item was stated: How many teachers in your school are given assistance, as needed, by the principal to solve classroom problems in reading?

The item analysis yielded significant differences between category 1 and category 2 teacher respondents.

Category 1 teachers (4.45) rated their principals as helping almost all teachers when assistance was needed in reading. Category 2 teachers (3.14), however, indicated that they perceived their principals as assisting to a significantly lesser degree.

Involvement Questionnaire Item 5

The item was stated: How many teachers in your school plan a program of reading skills with the principal based upon identified student needs?

The item analysis indicated that the responses from category 1 and category 2 teachers were not significantly different. Category 1 teachers (3.95) rated their principals and the extent of their involvement with teachers in planning a program of reading skills as involving many teachers. Category 2 teachers (3.11) perceived themselves as involved with the principal in the planning process to a lesser but not significantly different degree. Therefore, the findings indicated that the perceptions of category 1 and category 2 teachers were not significantly different in terms of their principals' involvement behavior relative to planning reading skills programs based upon identified student needs.

Involvement Questionnaire Item 6

The item was stated: How many teachers in your school work with the principal to identify criteria for reviewing the effectiveness of the reading program?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.22) rated their principals' involvement with teachers in identifying criteria for reviewing reading program effectiveness as involving almost all teachers. Category 2 teachers (3.01), did not perceive themselves as involved with the principal in the criteria identification process. The findings indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' behavior relative to the identification of criteria for reviewing the effectiveness of the school reading program.

Involvement Questionnaire Item 7

The item was stated: How many teachers in your school are observed by the principal and given feedback concerning the classroom reading program and instructional techniques?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.63) rated their principals' involvement with teachers in observing and offering feedback relative to classroom techniques as involving almost all teachers. Category 2 teachers (3.37), however, did not perceive themselves as involved with the principal in the observation-feedback process.

The findings of this study indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the observation of classroom techniques used in the instruction of reading and the feedback rendered.

Involvement Questionnaire Item 8

The item was stated: How many teachers in your school review test data with the principal, discussing ways to utilize the results for improvement of the reading program?

Results of the item analysis conducted indicated that differences between the respondents were significant.

Responses from category 1 teachers (5.04) were significantly higher than responses from category 2 teachers (3.74) relative to their principals reviewing and utilizing test data for program improvement in reading. The findings indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to utilizing test data for reading program improvement.

Involvement Questionnaire Item 9

The item was stated: How many teachers in your school are encouraged by the principal to schedule sufficient time to plan for the reading program?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (5.41) rated their principals' involvement with teachers in encouraging the scheduling of sufficient planning time as involving almost all teachers. Category 2 teachers (3.97), however, did not perceive themselves as involved with the principal in receiving encouragement to schedule planning time.

Therefore, the results indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior. Teacher groups did not agree on the percentage of teachers encouraged by the principal to schedule sufficient time for the planning of the school reading program.

Involvement Questionnaire Item 10

The item was stated: How many teachers in your school are assisted by the principal in implementing a classroom management system in reading?

The results of the item analysis concerning implementing classroom management systems indicated no significant differences between category 1 and category 2 teacher responses. Category 1 teachers (3.95) perceived their principals as assisting many teachers in the implementation of a classroom management system. Category 2 teachers (2.94) perceived themselves as involved with the principal in the classroom management process to a lesser but not significantly different degree. Therefore, the findings indicated that the perceptions of category 1 and category 2 teachers were not significantly different in terms of their principals' involvement behavior relative to the assistance given in implementing a classroom management system for reading.

Involvement Questionnaire Item 11

The item was stated: How many teachers in your school are encouraged by the principal to expect all students to master basic reading skills?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (5.71) rated their principals' involvement with teachers in the encouragement-expectation process as involving almost all teachers. Category 2 teachers (3.92), however, did not perceive themselves as involved with the principal in receiving the encouragement relative to the expectations for student performance. Therefore, the findings indicated that category 1 and 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the encouragement given by the principal toward student performance expectations in reading.

Involvement Questionnaire Item 12

The item was stated: How many teachers in your school are encouraged by the principal to utilize parents and volunteers in the school reading program?

The analysis of this item indicated that differences were significant between teacher group respondents. Category 1 teachers (4.74) perceived their principals as encouraging almost all teachers to utilize parents and volunteers in the school reading program. Category 2 teachers (3.23), however, perceived their principals as offering less encouragement to involve parents and volunteers in the reading program.

The findings indicated that category 1 and 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the encouragement given to utilize parents and volunteers in the school reading program.

Involvement Questionnaire Item 13

The item was stated: How many teachers in your school are encouraged by the principal to allow students time each day to practice reading skills and activities such as free reading, open library or silent sustained reading?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (5.43) rated their principals' involvement with teachers in the encouragement of student time for reading as involving almost all teachers. Category 2 teachers (3.76) indicated, however, that they did not perceive themselves as involved with their principals in receiving encouragement to permit concentrated reading time

In general, the findings indicated that category 1 and 2 teachers' perceptions of their principals' involvement behavior relative to encouraging concentrated reading activities were significantly different.

Involvement Questionnaire Item 14

The item was stated: How many teachers in your school are encouraged by the principal to assist with ways to help their children with reading at home?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (5.03) rated their principals' involvement with teachers in the encouragement behavior as involving almost all teachers. Category 2 teachers (3.30), however, did not perceive themselves as involved with the principal in receiving encouragement in this area. Therefore, the findings indicated that category 1 and 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the encouragement rendered by the principal to assist with the improvement of reading at home.

Involvement Questionnaire Item 15

The item was stated: How many teachers in your school plan with the principal for individual teacher improvement of reading instruction?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (3.91) rated their principals' involvement with teachers in the instructional improvement process as involving many teachers. Category 2 teachers (2.78), however, did not perceive themselves as involved with the principal in this process.

The findings indicated that category 1 and 2 teachers had significantly different perceptions of their principals' involvement behavior relative to individual principal-teacher planning for the improvement of reading instruction.

Involvement Questionnaire Item 16

The item was stated: How many teachers at your school use the principal as a resource in planning for reading program activities?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different to this item. Category 1 teachers (3.66) rated their principals' involvement with teachers in being utilized as a planning resource as involving many teachers. Category 2 teachers (2.49), however, indicated that they did not perceive themselves as being involved with the principal in the planning process to a similar degree.

Therefore, the findings indicated that category 1 and category 2 teachers' perceptions of their principals' involvement behavior relative to his usefulness as a resource in planning for reading program activities were significantly different.

Involvement Questionnaire Item 17

The item was stated: How many teachers in your school use other personnel as a resource in planning for reading program activities?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (5.31) rated their involvement with outside resources as involving almost all teachers. Category 2 teachers (3.84), however, perceived themselves as involved to a lesser degree in using others as resources.

Therefore, the findings indicated that category 1 and category 2 teachers had significantly different perceptions of teacher involvement relative to the use of outside resources in planning reading program activities.

Involvement Questionnaire Item 18

The item was stated: How many students in your school are observed by the principal during instructional reading activities and given feedback to encourage their efforts?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.02) rated their involvement with students in the reading process as involving many students. Category 2 teachers (2.88), however, did not perceive students as involved with the principal in instructional reading activities. The findings, therefore, indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the observation of students during instructional reading activities.

Involvement Questionnaire Item 19

The item was stated: How many students in your school are encouraged by the principal to help plan reading activities that may improve student attitudes toward reading?

The item analysis indicated that the responses from category 1 and category 2 teachers were not significantly different. Category 1 teachers (3.82) rated their principals' involvement with students in the planning and attitude improvement process as involving some students. Category 2 teachers (2.83) perceived their students as involved with the principal in receiving encouragement for helping to plan reading activities to a lesser but not significantly different degree.

Therefore, the findings indicated that category 1 and 2 teachers had similar perceptions of their principals' involvement behavior relative to the number of students encouraged by the principal to help plan reading activities that may improve student attitudes toward reading.

Involvement Questionnaire Item 20

The item was stated: How many students in your school are encouraged by the principal to evaluate their own progress in reading?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (3.65) rated their principals' involvement with students in the reading evaluation process as involving some students. Category 1 and category 2 teachers (2.41), however, did not perceive students as involved with the principal in receiving encouragement to evaluate their reading progress.

The findings, therefore, indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the encouragement of students to evaluate their own progress in reading.

Involvement Questionnaire Item 21

The item was stated: How many students in your school have the opportunity to demonstrate their skills in reading to the principal?

The item analysis indicated that the responses from category 1 and category 2 teachers were not significantly different. Category 1 teachers (3.49) rated their principals' involvement with students in the demonstration of reading skills as involving some students. Category 2 teachers (2.60) perceived their students as involved with the principal in the reading skill demonstration process to a lesser but significantly different degree.

Therefore, the findings indicated that category 1 and 2 teachers had similar perceptions of their principals' involvement behavior relative to student opportunities to demonstrate reading skills to the principal.

Involvement Questionnaire Item 22

The item was stated: How many students in your school believe that reading is important because their principal places importance on reading?

The analysis of this item indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.23) rated their principals' involvement with students in emphasizing the importance of reading as involving many students. Category 2 teachers (3.06), however, did not perceive students as involved with the principal in receiving the principal's emphasis on reading.

Therefore, the findings indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to students believing that reading is important because their principal believes so.

Involvement Questionnaire Item 23

The item was stated: How many students in your school work to master basic reading skills because they believe that the principal has high expectations for all children?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.19) rated their principals' involvement with students in communicating high reading performance expectations as involving many students. Category 2 teachers (2.91), however, did not perceive students as involved with the principal in knowing of the principal's high expectations.

The findings indicated that category 1 and 2 teachers had significantly different perceptions of their principals' behavior relative to the number of students who work to master basic reading skills because they believe that the principal has high expectations for all children.

Involvement Questionnaire Item 24

The item was stated: How many parents in your school are surveyed by the principal to determine the parents' evaluation of the school reading program?

The analysis of this item indicated that the responses from category 1 and category 2 teachers were not significantly different. Category 1 teachers (3.44) rated their principals' involvement with parents in evaluating the school reading program as involving some parents. Category 2 teachers (2.51), to a lesser but not significantly different degree, perceived some parents as involved with the principal in the evaluation process.

The findings, therefore, indicated that the perceptions of category 1 and category 2 teachers relative to their principals' involvement behavior with parents in evaluating the school reading program were not significantly different.

Involvement Questionnaire Item 25

The item was stated: How many parents in your school are encouraged by the principal to emphasize the importance of reading with children at home?

The item analysis indicated that the responses from category 1 and 2 teachers were significantly different. Category 1 teachers (4.76) rated their principals' involvement with parents in encouraging reading at home as involving many parents. Category 2 teachers (3.23), however, did not perceive parents as involved with the principal in receiving encouragement to emphasize home reading. Therefore, the findings indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the encouragement given to parents emphasizing the importance of reading at home.

Involvement Questionnaire Item 26

The item was stated: How many parents in your school are encouraged by the principal to volunteer time to assist students and teachers in reading related activities at school?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.15) rated their principals' involvement with parents by encouraging volunteer time, as involving many parents. Category 2 teachers (2.82), however, did not perceive parents as involved with the principal in receiving encouragement to volunteer in assisting at school.

The findings indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement behavior relative to the encouragement given to parents to volunteer time in assisting students and teachers with reading related activities in school.

Involvement Questionnaire Item 27

The item was stated: How many parents in your school work with the principal to identify goals for the school reading program?

The item analysis indicated that the responses from category 1 and category 2 teachers were not significantly different. Category 1 teachers (3.01) rated their principals' involvement with parents in identifying reading program goals as involving some parents. Category 2 teachers (1.99), to a lesser but not significantly different degree, perceived few parents as involved with the principal in the goal identification process.

The findings, therefore, indicated that the perception of category 1 and 2 teachers relative to their principals' involvement behavior with parents in identifying goals for the school reading program were not significantly different.

Involvement Questionnaire Item 28

The item was stated: How many parents in your school participate with the principal on advisory committees, studying and making recommendations regarding the reading program?

The analysis of this item indicated that the response from category 1 and category 2 teachers were not significantly different. Category 1 teachers (3.01) rated their principals' involvement with parents in an advisory capacity as involving some parents. Category 2 teachers (1.98), to a lesser but no significantly different degree, perceived parents as involved with the principal in the study-recommendation process.

Therefore, the findings indicated that category 1 and category 2 teachers had similar perceptions of the principal's involvement behavior relative to participation with parents in an advisory capacity to the school reading program.

Involvement Questionnaire Item 29

The item was stated: How many parents in your school are aware of the goals of the reading program because the principal has communicated the goals to parents?

The item analysis indicated that the responses from category 1 and category 2 teachers were significantly different. Category 1 teachers (4.18) rated their involvement with parents in communicating program goals as involving many parents. Category 2 teachers (2.83), however, did not perceive parents as involved with the principal in receiving communication relative to reading program goals.

Therefore, the findings indicated that category 1 and category 2 teachers had significantly different perceptions of their principals' involvement relative to the number of parents aware of the school's reading program goals.

Note: Individual item teacher mean scores and standard deviations by category were presented in Table 6.

Demographic Characteristics

The second question asked in this study was: Are there differences in the demographic characteristics of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?

As a group, category 1 principals did not differ significantly from category 2 principals in training, years of experience as the elementary principal, date of most recent degree held, number of college courses in reading, number of inservice courses in reading, years as an elementary teacher, nor major area of certification. For the principals identified in this study, demographic characteristics were not found to be among the differentiating factors between category 1 and category 2 schools.

Findings of the present study did not support previous research in demographic characteristics of principals. The homogeneity of employment requirements, however, now in effect throughout the schools within the study relative to required degree, certification and training, may have accounted for nonsignificant results and a lack of support of previous research.

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Included in this section are statements, conclusions and recommendations generated by the findings of this study.

Summary

Helping children develop skills in reading has been and continues to be a major focus of the elementary school program. Teachers, principals, and parents share this direction. As the individual responsible for the management of school activities, the principal has the opportunity to influence the reading program and student achievement. Leadership behaviors and demographic characteristics of the elementary school principal as they relate to student achievement and the reading program were investigated in this study.

Recent effective schools research supports the need for principals to be involved with teachers, students, and parents. The involvement of the principal in the school reading program was seen as a means of improving student learning. Authorities in the field of reading have viewed the principal not only as the administrative head but also as the instructional leader. Proponents of this view perceive the principal as one who initiates, provides, supports, stimulates, and evaluates. The principal can be a significant force in ensuring that the educational process will lead to the desired end product, student achievement.

Much conjecture has been offered about what principals should do to promote student achievement. An apparent need was to identify those activities in which principals were engaged that would be associated with student learning. Therefore, the present study was designed to identify principal behaviors related to the school reading program which distinguished principals of schools which met or surpassed anticipated reading achievement test scores from principals of schools which did not meet anticipated reading achievement test scores.

A questionnaire that focused upon the principal's involvement behavior with teachers, students, and parents in reading was selected for use in this study. Each of the 29 questionnaire items was empirically developed through the research indicated in this study. Participants in the study responded to each item on a 6-point bipolar numerical scale, rating the involvement of teachers, students and parents with the principal in reading program activities. Demographic information was collected on a second questionnaire. Teachers and principals completed identical questionnaires. Schools selected in the final sample for the study were among the highest and lowest scoring schools on the CTBS Achievement Test given in the Spring of 1983 in Hillsborough County, Florida. Participating in the study were 40 principals and 186 teachers. Category 1 schools were represented by 20 principals and 93 teachers. Category 2 schools were represented by 20 principals and 93 teachers.

The basic design of this study involved the comparison of two groups of schools in relation to the principals' involvement behavior in the elementary reading program. The extent of the principal's involvement with teachers, students, and parents in the reading program was determined by ratings on the involvement questionnaire.

Responses to questionnaire items by all participants were examined through 5 comparisons designed to indicate significant differences between the principal leadership behaviors of Category 1 and 2 schools. The "t" test for independent samples was used and significant differences were found and described. Hotellings T-square multivariate procedure was then used to analyze significant individual behaviors.

Demographic characteristics of principals were also investigated. The purpose of this investigation was to examine whether significant differences existed between the demographic characteristics of principals of Category 1 and Category 2 schools. The chi-square test of independence was employed to test the relationship between levels of student achievement and the following demographic characteristics of principals:

(a) Years of experience as an elementary principal
(b) Date of most recent degree/degrees held
(c) Major certification area
(d) Number of college courses in reading completed
(e) Years of elementary teaching experience
(f) Number of inservice training courses in reading completed

No significant differences were found among demographic variables which would differentiate principals from Category 1 and Category 2 schools.

Summary Statements

The design of this study is ex post facto. The sampling, instrumentation and data collection procedures employed in this study were selected in order to maximize external validity and are constructed based upon empirical research recommendations (Ary et al., 1979; Williams, 1978).

The procedures used in this study were selected in order to minimize the weaknesses inherent in the ex post facto design. These potential weaknesses include: (1) possibilities for spurious results due to the inability to manipulate variables; (2) possibilities of common causes or the possibility that both the independent and dependent variables of the study are merely results of a third variable; (3) possibilities of reverse causality or that the reverse of the suggested hypothesis could also account for the findings; and (4) possibilities that other independent variables could exist in addition to the one under consideration which could cause the observed variation (Ary, Jacobs, Razavieh, 1979). Relative to these limitations and based upon the synthesis and analysis of data, the following information is presented:

Differences in Category 1 and Category 2 Schools

The following statements outline certain relationships pertaining to the principals involvement behavior in the school reading program which distinguished Category 1 schools from Category 2 schools based upon the perceptions of the principals and teachers in this study.

(a) The leadership behaviors of principals of Category 1 schools were rated significantly higher than the leadership behaviors of principals of Category 2 schools.
(b) Principals of Category 1 schools rated their own leadership behaviors at similar levels with their teachers and curriculum supervisors. Principals of Category 2 schools rated their own leadership behavior at similar levels of principals in Category 1. However, their teachers and curriculum supervisors rated the leadership behaviors of principals of Category 2 schools at a significantly lower level.
(c) Principals of Category 1 schools were were perceived as significantly more involved with teachers, students and parents in the school reading program.

Similarities in Category 1 and Category 2 Schools

(a) Principals of Category 2 schools rated their own leadership behaviors at similar levels to principals of Category 1 schools.

(b) Curriculum supervisors rated the leadership behaviors of principals of Categories 1 and 2 schools at similar levels with the teachers of both categories.

(c) Demographic characteristics identified in this study did not distinguish principals of Category 1 schools from principals of Category 2 schools. Data relative to planning, methods of grouping, implementation and evaluation did not distinguish Category 1 schools from Category 2 schools in the study.

Teacher Perceived Differences in Category 1 and Category 2 Principals' Leadership Behaviors

The perceptions of Category 1 teachers were significantly higher than the perceptions of Category 2 teachers for the following involvement behaviors of their principals:

1. Working with teachers to identify goals for the school reading program.
2. Providing teachers the materials needed for instruction.
3. Working with teachers to identify and plan for inservice needs in reading.
4. Working with teachers to identify criteria for reviewing the effectiveness of the reading program.
5. Observing teachers and giving feedback concerning the classroom reading program and instructional techniques.
6. Reviewing with teachers test data and discussing ways to utilize the results for improvement of the reading program.
7. Encouraging teachers to schedule sufficient time to plan for the reading program.
8. Encouraging teachers to expect all students to master basic reading skills.
9. Encouraging teachers to utilize parents and volunteers in the school reading program.
10. Encouraging teachers to assist with ways to help children with reading at home.
11. Planning with teachers for individual teacher improvement of reading instruction.
12. Using other personnel as a resource in planning for reading program activities.
13. Observing students during instructional reading activities and giving feedback to encourage their efforts.
14. Encouraging students to evaluate their own progress in reading.
15. Stressing the importance of reading to students.
16. Making students aware of principal's high expectation.
17. Encouraging parents to emphasize the importance of reading with children at home.
18. Encouraging parents to volunteer time to assist students and teachers in reading-related activities at school.
19. Informing parents of the goals of the reading program.
20. Giving assistance to teachers as needed to solve classroom reading problems.
21. Encouraging teachers to allow students time each day to practice reading skills in activities such as free reading, open library, or silent sustained reading.
22. Making time available to serve teachers as a resource in planning for reading program activities.

Teacher Perceived Similarities in Category 1 and Category 2 Principals' Leadership Behaviors

Teacher's perceptions of Category 1 and Category 2 principals were not significantly different for the following involvement behaviors:

1. Planning with teachers a program of reading skills based upon identified student needs.
2. Assisting teachers in implementing a classroom management system in reading.
3. Encouraging students to help plan reading activities that may improve student attitudes toward reading.
4. Giving students the opportunity to demonstrate their reading skills.
5. Participating with parents on advisory committees, studying and making recommendations regarding the reading program.
6. Surveying parents to determine the parents' evaluation of the school reading program.
7. Working with parents to identify goals for the school reading program.

The perceptions of Category 1 teachers were significantly higher than the perceptions of Category 2 teachers for the following involvement behaviors of their principals:

1. Working with teachers to identify goals for the school reading program.
2. Providing teachers the materials needed for instruction.
3. Working with teachers to identify and plan for inservice needs in reading.
4. Working with teachers to identify criteria for reviewing the effectiveness of the reading program.
5. Observing teachers and giving feedback concerning the classroom reading program and instructional techniques.
6. Reviewing with teachers test data and discussing ways to utilize the results for improvement of the reading program.
7. Encouraging teachers to schedule sufficient time to plan for the reading program.
8. Encouraging teachers to expect all students to master basic reading skills.
9. Encouraging teachers to utilize parents and volunteers in the school reading program.
10. Encouraging teachers to assist with ways to help children with reading at home.
11. Planning with teachers for individual teacher improvement of reading instruction.
12. Using other personnel as a resource in planning for reading program activities.
13. Observing students during instructional reading activities and giving feedback to encourage their efforts.
14. Encouraging students to evaluate their own progress in reading.
15. Stressing the importance of reading to students.
16. Making students aware of principal's high expectation.
17. Encouraging parents to emphasize the importance of reading with children at home.
18. Encouraging parents to volunteer time to assist students and teachers in reading-related activities at school.
19. Informing parents of the goals of the reading program.
20. Giving assistance to teachers as needed to solve classroom reading problems.
21. Encouraging teachers to allow students time each day to practice reading skills in activities such as free reading, open library, or silent sustained reading.
22. Making time available to serve teachers as a resource in planning for reading program activities.

Conclusions and Recommendations

The purpose of this study was to examine the relationship between the perceived leadership behaviors and demographic characteristics of principals and the reading achievement levels of students in elementary schools. The study was designed to examine specific principal behaviors which distinguished principals of schools with more effective reading programs from principals of schools with less effective reading programs.

Answers to the following questions were sought: (1) Are there differences in the perceived leadership behaviors of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels? and (2) Are there differences in the demographic characteristics of principals when comparing schools attaining anticipated reading achievement levels with schools not attaining anticipated reading achievement levels?

The data from this study support the hypothesis that a relationship does exist between the principal's leadership behavior relative to the school reading program and the reading achievement levels of students within that program. The results of the data analysis, however, indicated no relationship between the demographic characteristics of principals examined in this study and the levels of student reading achievement in their schools. The homogeneity of required characteristics of principals within the sample could have affected this result.

The findings suggest that teachers in schools with more effective reading programs perceived their principals as being highly visible and involved with teachers, students and parents. The teachers in schools with less effective reading programs perceived their principals as significantly less involved. The conclusion drawn here is that the principals of schools with more effective reading programs are more effective in the areas of personnel management, public relations and in assuming the ultimate responsibility of instructional leadership within the school.

Based upon the significant difference between the perceptions of teachers and principals in schools with less effective reading programs, the principals of schools with more effective reading programs appear to be more perceptive more sensitive and less defensive in relation to their own performance and behavior. The findings also suggest that principals of schools with more effective reading programs were more receptive to the use of outside personnel as resources. They viewed themselves, however, as the person responsible for student achievement test scores and the implementation of curriculum. Although all sample schools had the available services of curriculum supervisors and resident curriculum specialist, written comments and questionnaire responses by principals of schools with less effective reading programs indicated that the responsibility related to many of the behaviors examined was assigned to the resident curriculum specialist. Principals of schools with less effective reading programs, to a higher degree, assigned to the curriculum specialist the responsibilities of test score analysis, curriculum planning, program evaluation, student grouping and ultimately the leadership of the instructional reading program. The use of outside resources listed by principals and teachers of schools with more effective reading programs indicated that those principals used significantly more resources, yet defined those resources within the framework of the principals' leadership design.

Results of this study indicate that those schools with the most effective reading programs also used the highest number of parent and community resources. The leadership skills and accurate perceptions required to manipulate outside school resources and relate to teachers, students and parents appear to be fundamental to an effective school reading program.

The major contribution of this study to the field of educational leadership is in the identification of specific perceived behaviors which differentiated the strengths of more effective principals from the weaknesses of less effective principals.

The implications and discussion of the variables associated with this study will add to the empirical base for future research in this field.

The application of the findings presented in this study result initially in the following recommendations:

1. All elementary principals, specifically those of schools with ineffective reading programs, need to be visible, knowledgeable about curriculum, diplomatically assertive as the school's instructional leader and involved with teachers, students and parents.
2. All elementary principals, specifically those of schools with ineffective reading programs, should ensure the carefully planned use of resource personnel such as curriculum specialsits, curriculum supervisors, volunteer programs and community agencies to enhance student achievement.
3. All elementary principals, specifically those of schools with ineffective reading programs, should be active and involved in the interpretation of standardized test scores and in communicating strengths, weaknesses and planned curriculum improvements with teachers, students and parents.

Since other research has also shown that specific principal behaviors can be identified in more effective schools, (Madden, 1976; Brookover, 1979; Purkey and Smith, 1983) several researchers and professional organizations have developed comprehensive administrative selection and training programs. One such program is the National Association for School Principals Assessment Center. The Assessment Center is used to identify candidates for threshold administration jobs and make development suggestions for each participant. Its training program is based upon 12 behavior dimensions with specific definitions which were found to relate to the most important characteristics of effective, successful principals.

The Florida Council on Educational Management guidelines present a proposal for the training, selecting, appointing, diagnosing, assessing, certifying and compensating educational managers for excellence. Each school district in Florida is expected to soon implement and maintain state-of-the-art human resource management practices which ensure excellence.

In support of this trend and in light of this study the following recommendations are presented:

1. The interview process for elementary school administrative positions should be examined to ensure that potential administrators demonstrate a thorough knowledge of curriculum and fully understand the responsibilities of instructional leadership.
2. A definite, planned leadership training program should be developed that would enable future elementary school principals an opportunity to work with known effective school administrators.

   The proposed peer-principal program could be established for a specific time frame and would permit the potential principal an opportunity to share experiences and observe the necessary behaviors associated with effective school administrators. These include: Instructional leaders, involvement techniques, personnel management and public relations.

   Note: A parallel program could be developed which would permit the principals of schools with identified ineffective programs an opportunity to re-examine the fundamental requirements for effective school program management.

3. Institutions responsible for the initial training of individuals seeking certification in school administration should periodically examine course content to ensure that potential elementary school administrators are introduced to those behaviors with differentiate effective school principals from ineffective school principals. In-depth administrative studies, principal behavior research and administrator internship programs should be examined for feasibility.

Based upon the findings and conclusions presented in this study the following recommendations for future research are made:

1. Future studies should attempt to focus upon one aspect of the principal's leadership behavior. Narrowing the focus may increase the depth and descriptive ability of the data collected.

2. Further efforts should be made, in a larger more global sample of principals, to examine demographic characteristics of principals which may relate to student achievement in reading. The restrictions of a one county, one system sample may have hindered the study of demographic characteristics.

3. Future studies in principal leadership behaviors should employ observational techniques which would make data collection and analysis a more objective, empirical process.

4. Future studies should focus upon additional leadership behaviors identified by the Florida Council on Educational Management as high performance principal behavior indicators.

5. Future research should explore other definitions of effectiveness in order to provide a more complex description of the effective elementary school principal.

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Appendix A

INVOLVEMENT QUESTIONNAIRE

INVOLVEMENT QUESTIONNAIRE

For each question that follows, check the appropriate space as you feel the question reflects the participation of teachers in your school reading program. Check each question using this numbering system:

6 = all teachers
5 = almost all teachers
4 = many teachers
3 = some teachers
2 = a few teachers
1 = no teachers

How many teachers in your school:

		6	5	4	3	2	1
1.	Work with the principal to identify goals for the school reading program?						
2.	Are provided the materials needed for instruction through the principal's budgeting process?						
3.	Work with the principal to identify and plan for inservice needs in reading?						
4.	Are given assistance, as needed, by the principal to solve classroom reading problems?						
5.	Plan a program of reading skills with the principal based upon identified student needs?						
6.	Work with the principal to identify criteria for reviewing the effectiveness of the reading program?						
7.	Are observed by the principal and given feedback concerning the classroom reading program and instructional techniques?						
8.	Review test data with the principal, discussing ways to utilize the results for improvement of the reading program?						
9.	Are encouraged by the principal to schedule sufficient time to plan for the reading program?						

How many teachers in your school:

10.	Are assisted by the principal in implementing a classroom management system in reading?	6 5 4 3 2 1
11.	Are encouraged by the principal to expect all students to master basic reading skills?	6 5 4 3 2 1
12.	Are encouraged by the principal to utilize parents and volunteers in the school reading program?	6 5 4 3 2 1
13.	Are encouraged by the principal to allow students time each day to practice reading skills in activities such as free reading, open library, or SSR (Silent Sustained Reading)?	6 5 4 3 2 1
14.	Are encouraged by the principal to assist with ways to help their children with reading at home?	6 5 4 3 2 1
15.	Plan with the principal for individual teacher improvement of reading instruction?	6 5 4 3 2 1
16.	Use the principal as a resource in planning for reading program activities?	6 5 4 3 2 1
17.	Use other personnel as a resource in planning for reading program activities (please specify)_____ _____	6 5 4 3 2 1

For each question that follows, check the appropriate space as you feel the question reflects the participation of students or parents in your school reading program. Check each question using this numbering system?

6 = all students or parents
5 = almost all students or parents
4 = many students or parents
3 = some students or parents
2 = a few students or parents
1 = no students or parents

How many students in your school:

18.	Are observed by the principal during instructional reading activities and given feedback to encourage their efforts?	6 5 4 3 2 1

How many students in your school:

19.	Are encouraged by the principal to help plan reading activities that may improve student attitudes toward reading?	6 5 4 3 2 1
20.	Are encouraged by the principal to evaluate their own progress in reading?	6 5 4 3 2 1
21.	Have the opportunity to demonstrate their skill in reading to the principal?	6 5 4 3 2 1
22.	Believe that reading is important because their principal places importance on reading?	6 5 4 3 2 1
23.	Work to master basic reading skills because they believe that the principal has high expectations for all children?	6 5 4 3 2 1

How many parents in your school:

24.	Are surveyed by the principal to determine the parents' evaluation of the school reading program?	6 5 4 3 2 1
25.	Are encouraged by the principal to emphasize the importance of reading with children at home?	6 5 4 3 2 1
26.	Are encouraged by the principal to volunteer time to assist students and teachers in reading-related activities at school?	6 5 4 3 2 1
27.	Work with the principal to identify goals for the school reading program?	6 5 4 3 2 1
28.	Participate with the principal on advisory committees, studying and making recommendations regarding the reading program?	6 5 4 3 2 1
29.	Are aware of the goals of the reading program because the principal has communicated the goals to parents?	6 5 4 3 2 1

Appendix B

REFERENCE SOURCES FOR INVOLVEMENT QUESTIONNAIRE ITEMS

REFERENCE SOURCES UPON WHICH QUESTIONNAIRE ITEMS WERE BASED

Source	Questionnaire Items
Armor Et Al. (1979)	3, 5, 9, 10, 11, 15, 17
Avery (1979)	3, 9
Barnard & Hetzel (1976)	1, 4, 5, 6, 7, 8, 10
Braught (1977)	4, 7, 15
Crisculo (1973)	29
Durkin (1974)	1, 2, 7, 10
Edmonds (1979)	11, 23, 25
Gershman & Kershow (1977)	14
Howell (1975)	13, 19, 24, 29
Goodlad (1983)	9, 19, 24, 29
Jacoby-High (1981)	11, 23
Klopf (1972)	1, 27, 28, 29
Laffey (1980)	27, 29
Purkey & Smith (1983)	24, 26, 28, 29
Ralston (1979)	22, 23
Sanacore (1974,1977)	12, 26
Shoemaker & Fraser (1981)	5, 6, 8, 11, 15, 16, 17, 20, 23, 24, 25
Smith, Carter & Dapper (1970)	12, 26
Stanchfield (1976)	13, 18, 20, 21
Sweeney (1982)	1, 2, 4, 5, 6, 8, 10, 11, 15, 16, 17, 18, 20, 22, 24, 25

Turbowitz (Cited by Laffey, 1980)	21
Tyler (1983)	24, 25, 26, 28, 29
Wallace (1976)	1, 8

Appendix C

DEMOGRAPHIC INFORMATION QUESTIONNAIRE

DEMOGRAPHIC INFORMATION QUESTIONNAIRE

RESPONDENT: PRINCIPAL

Note: Each principal is asked to respond to each item relative to personal demographic information and individual school.

1. Years as an Elementary School Principal _____
   County Instructional Supervisor _____
   Curriculum Specialist _____
   Other _____ _____

2. Years at present school: _____

3. Years of elementary classroom teaching experience: _____

4. Degrees Held: (List)

Degree	Year Completed
_____	_____
_____	_____
_____	_____

5. Areas of Certification: (List if more than one)
   1. _____
   2. _____
   3. _____
   4. _____
   5. _____

6. Grade levels at present school (Check as appropriate)

   ___ ___ ___ ___ ___ ___ ___
   K 1 2 3 4 5 6

7. Number of college/university level courses completed in administration and/or supervision of Elementary Education:

   Check one (✓) _____ (1-3) _____ (4-6) _____ (7-9) _____ (10 or more)

8. Year of completion of most recent college/university level course in administration and/or supervision of Elementary Education:

   Check one (✓) _____ 1970 or prior _____ 1971-1975 _____ 1976-1980 _____ 1981-1984

9. Number of college/university level courses completed in preparation of teaching reading:

Check one (✓)

_____ (1-3) _____ (4-6) _____ (7-9) _____ (10 or more)

10. Year of completion of most recent college/university level course in preparation of teaching reading:

Check one (✓)

_____ 1970 or prior _____ 1971-1975 _____ 1976-1980 _____ 1981-1984

11. Number of system/state level in-service training courses completed in reading curriculum for which formal in-service credit was given:

Check one (✓)

_____ (1-3) _____ (4-6) _____ (7-9) _____ (10 or more)

12. Year of completion of most recent system/state level in-service training course in reading curriculum for which formal in-service credit was given:

Check one (✓)

_____ 1970 or prior _____ 1971-1975 _____ 1976-1980 _____ 1981-1984

13. Method primarily used for the planning of reading instruction within your school:

Check one (✓)

Total faculty planning ( ) Grade level planning ( )

Individual teacher planning ( ) Combination of methods ( ) specify below:

Other (describe) _____

_____

14. Describe the reading program in your school: Check one response in area A, area B and area C:

A. Basal Program ( )

Basal with alternative program ( )

Other (describe) _____

_____

B. Homogeneous grouping by grade for instruction ( )

Homogeneous grouping by class for instruction ( )

Individualized reading instruction ( )

Combination of methods ( )

Other (describe) _____

_____

C. The assignment of specific reading groups to teachers is made based upon the following rationale:

Teacher strength ( )

Teacher choice ( )

Seniority ( )

Other (describe) _____

_____

15. The evaluation of the school's reading program is accomplished primarily through: Check one (✓)

Test score analysis ( )

Classroom observation ( )

Reading management materials ( )

No evaluation ( )

Other (describe) _____

_____

16. The evaluation of individual student progress is accomplished primarily through: Check one (✓)

Test score analysis ( )

Classroom observation ( )

Reading management materials ( )

No evaluation ( )

Other (describe) _____

_____

17. The evaluation of teacher competencies in the instruction of reading is accomplished primarily through: Check one (✓)

Test score analysis ( )

Classroom observation ( )

Reading management materials ( )

No evaluation ( )

Other (describe) _____

_____

Comments: _____

_____

_____

_____

DEMOGRAPHIC INFORMATION QUESTIONNAIRE

RESPONDENT: TEACHER

Note: Each teacher is asked to respond to each item relative to personal demographic information and individual school.

1. Years of elementary classroom teaching experience: _____

2. Years at present school: _____

3. Degrees Held: (List)

Degree	Year Completed
_____	_____
_____	_____
_____	_____

4. Areas of Certification: (List if more than one)

1. _____
2. _____
3. _____
4. _____
5. _____

5. Grade levels at present school (Check as appropriate)

K	1	2	3	4	5	6
____	____	____	____	____	____	____

6. Number of college/university level courses completed in preparation of teaching reading:

Check one (✓)

(1-3) (4-6) (7-9) (10 or more)

7. Year of completion of most recent college/university level course in preparation of teaching reading:

Check one (✓)

1970 or prior 1971-1975 1976-1980 1981-1984

8. Number of system/state level in-service training courses completed in reading curriculum for which formal in-service credit was given:

Check one (✓)

(1-3) (4-6) (7-9) (10 or more)

9. Year of completion of most recent system/state level in-service training course in reading curriculum for which formal in-service credit was given:

Check one (✓)

_____ 1970 or prior _____ 1971-1975 _____ 1976-1980 _____ 1981-1984

10. Method primarily used for the planning of reading instruction within your school:

Check one (✓)

Total faculty planning ( ) Grade level planning ( )

Individual teacher planning ( ) Combination of methods ( ) specify below:

Other (describe) _____

_____

11. Describe the reading program in your school: Check one response in area A, area B and area C:

A. Basal Program ( )

Basal with alternative program ( )

Other (describe) _____

_____

B. Homogeneous grouping by grade for instruction ( )

Homogeneous grouping by class for instruction ( )

Individualized reading instruction ( )

Combination of methods ( )

Other (describe) _____

_____

C. The assignment of specific reading groups to teachers is made based upon the following rationale:

Teacher strength ( )

Teacher choice ( )

Seniority ( )

Other (describe) _____

_____

12. The evaluation of the school's reading program is accomplished <u>primarily</u> through: Check one (✓)

Test score analysis ( )

Classroom observation ( )

Reading management materials ( )

No evaluation ( )

Other (describe) _____

13. The evaluation of individual student progress is accomplished primarily through : Check one (✓)

Test score analysis ( )

Classroom observation ( )

Reading management materials ( )

No evaluation ( )

Other (describe) _____

_____

14. The evaluation of teacher competencies in the instruction of reading is accomplished primarily through: Check one (✓)

Test score analysis ( )

Classroom observation ( )

Reading management materials ( )

No evaluation ( )

Other (describe) _____

_____

Comments: _____

_____

_____

_____

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